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Global E-Government, 2007

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Executive Summary

In this report, I present the seventh annual update on global e-government. Using an analysis of 1,687 government websites in 198 different nations undertaken during Summer, 2007, I investigate electronic government. Among the significant findings of the research are:

- 1) *28 percent of government websites offer services that are fully executable online, about the same as last year.*
- 2) *96 percent of websites this year provide access to publications and 80 percent have links to databases.*
- 3) *29 percent (up from 26 percent in 2006) show privacy policies, while 21 percent have security policies (up from 14 percent in 2006).*
- 4) *23 percent of government websites have some form of disability access, meaning access for persons with disabilities, the same as last year.*
- 5) *Countries vary enormously in their overall e-government performance based on our analysis. The most highly ranked nations include South Korea, Singapore, Taiwan, the United States, Great Britain, Canada, Portugal, Australia, Turkey, and Germany.*

A Note on Methodology

The data for our analysis consist of an assessment of 1,687 national government websites for the 198 nations around the world (see Appendix for the full list of countries). We analyze a range of sites within each country to get a full sense of what is available in particular nations. Among the sites analyzed are those of executive offices (such as a president, prime minister, ruler, party leader, or royalty), legislative offices (such as Congress, Parliament, or People's Assemblies), judicial offices (such as major national courts), Cabinet offices, and major agencies serving crucial functions of government, such as health, human services, taxation, education, interior, economic development, administration, natural resources, foreign affairs, foreign investment, transportation, military, tourism, and business regulation. Websites for subnational units, obscure boards and commissions, local government, regional units, and municipal offices are not included in this study. The analysis was undertaken during June and July, 2007 at Brown University in Providence, Rhode Island. Tabulation for this project was completed by Emilie Aries, Matthew McCabe, Amy Chang, Robert Newcomb, Akram Abed, Anna Geyler, Lauren Faulkner, Ji Yoon, and Feryaz Ocakli. National government website addresses can be found at www.INSIDEPolitics.org/world.html.

Websites are evaluated for the presence of various features dealing with information availability, service delivery, and public access. Features assessed included the name of the nation, region of the world, and having the following features: online publications, online database, audio clips, video clips, non-native languages or foreign language translation, commercial advertising, premium fees, user payments, disability access, privacy policy, security features, presence of online services, number of different services, digital signatures, credit card payments, email address, comment form, automatic email updates, website personalization, personal digital assistant (PDA) access, and an English version of the website. Where national government websites are not in English, our research team used foreign language readers to evaluate government websites. Among the languages assessed were English, Spanish, Arabic, Korean, German, Portuguese, Russian, French, Turkish, and Chinese.

Online Information

In looking at specific features of government websites, we want to see how much material was available that would inform citizens. Most agencies have made extensive progress at placing information online for public access. Ninety-six percent of government websites around the world

offer publications that a citizen can access (up from 94 percent in 2005), and 80 percent provided databases (up from 72 percent last year).

Percentage of Websites Offering Publications and Databases

	2001	2002	2003	2004	2005	2006	2007
<i>Phone Contact Info.</i>	70%	77%	--	--	--	--	--
<i>Address Info</i>	67	77	--	--	--	--	--
<i>Links to Other Sites</i>	42	82	--	--	--	--	--
<i>Publications</i>	71	77	89	89	89	94	96%
<i>Databases</i>	41	83	73	62	53	72	80
<i>Audio Clips</i>	4	8	8	12	9	13	20
<i>Video Clips</i>	4	15	8	13	11	14	22

A growing number of public sector websites are incorporating audio clips or video clips on their official sites. This year, we found that 20 percent provided audio clips (up from 13 percent last year) and 22 percent offered video clips (up from 14 percent the previous year).

Electronic Services

For e-government service delivery, we look at the number and type of online services offered. Features are defined as services only if the entire transaction can occur online. If a citizen has to print out a form and then mail it back to the agency to obtain the service, we do not count that as a service that can be fully executed online. Searchable databases count as services only if they involved accessing information that result in a specific government service response.

Of the websites examined around the world, 28 percent have services that are fully executable online, compared to 29 percent in 2006, 19 percent in 2005, 21 percent in 2004, 16 percent in 2003 and 12 percent in 2002. Of this group, 11 percent offer one service, four percent have two services, and 13 percent have three or more services. Seventy-two percent have no online services.

Number of Online Services	2001	2002	2003	2004	2005	2006	2007
None	92%	88%	84%	79%	81%	71%	72%
One	5	7	9	11	8	14	11
Two	1	2	3	4	3	5	4
Three or more	2	3	4	6	8	10	13

North America (including the United States, Canada, and Mexico) is the area offering the highest percentage of online services. Sixty-two percent had fully executable, online services. This was followed by Asia (36 percent), Western Europe (34 percent), and the Middle East (29 percent), and Pacific Ocean Islands (28 percent). Only 22 percent in Central America, 10 percent in Russia, and 9 percent in Africa offer online government services.

Percentage of Government Sites Offering Online Services by Region of World

	2001	2002	2003	2004	2005	2006	2007
<i>North America</i>	28%	41%	45%	53%	56%	71%	62%
<i>Pacific Ocean Islands</i>	19	14	17	43	24	48	28
<i>Asia</i>	12	26	26	30	38	42	36

<i>Middle East</i>	10	15	24	19	13	31	29
<i>Western Europe</i>	9	10	17	29	20	34	34
<i>Eastern Europe</i>	--	2	6	8	4	12	11
<i>Central America</i>	4	4	9	17	15	11	22
<i>South America</i>	3	7	14	10	19	30	46
<i>Russia/Central Asia</i>	2	1	1	2	3	11	10
<i>Africa</i>	2	2	5	8	7	9	9

Common services include voter registration, visa application, passport application/renewal, job listings and online application, and requests for statistical reports. Online tax filing was very prevalent, and was found on the Belgian Portal Site, the Pakistani Customs site, the Philippine Portal, and the French Economic Ministry. Many departments offer online complaint forms. For example, the Malaysian Portal site has links to many of these forms. The Netherlands has a dedicated site for their Ombudsman, which accepts online complaint submissions. The New Zealand Department of Internal Affairs lets you complain about the presence of “objectionable material”. Several Philippine sites, such as the Portal page, Armed Forces, and Public Works have complaint forms. The South African Public Protector has an online complaint form.

Applying for and renewing licenses and permits is another common area where services are offered. The Mauritius Portal lets you apply for work permits and learner’s licenses and the New Zealand Economic Development website lets you renew an electrical workers or radio license. Many departments allow you to apply for government jobs online, including the New Zealand Portal.

Many sites allow you to order publications, including the Slovenia Tourism Board, South African Department of Environment & Tourism, Australian Portal site, Slovakia Industrial Property site, and the Swiss Intellectual Property Institute. Several sites allow users to apply for grants online, including the New Zealand portal and U.S. Department of Homeland Security.

Various websites allow for electronic document filing. The New Zealand portal lets you file various corporate documents (including annual returns). The Slovakia Industrial Property uses a digital signature system to enable its e-filing of documents. The Swiss Intellectual Property Institute offers the ability to file trademark applications through “e-Trademark” The U.S. Securities and Exchange Commission has the EDGAR Service, which allows for the online filing of 116 different forms.

Several sites are unique in their attempt to encourage electronic government. The Swiss Intellectual Property Institute offers the “e-Trademark” service to help file trademark applications, and the fees for electronic filing are less than those for submitting paper copies. The Slovakia Industrial Property also offers online filing of documents for reduced fees online.

Several countries offered unique online services. The Republic of Congo offers a means to send SMS text messages from its site, for a fee. The New Zealand Portal and Conservation site allow online booking of huts and campsites in national parks. The Australian Toilet Map found at the National Continenence Management Strategy lets you browse and pinpoint public toilets throughout Australia and see toilets along a planned route. Visitors can suggest additions to the toilet database. The Philippine Portal offers a link to an online betting site for basketball games run by the Philippine Amusement and Gaming Corporation. The Luxembourg Education Ministry has a link to its mySchool Portal where students can take online classes and tests and receive help with homework. The U.S. Consumer Product Safety Administration allows users to search the National Electronic Injury Surveillance System database for case studies of injuries to people by consumer products.

Mexico’s Ministry of the Economy site has an online “conversation forum” available to visitors where you can have an instant message conversation with agency officials. Colombia’s Ministry of Education allows users to elect to erase all cookies placed on their hard drive periodically as they log in with their username and password. Guatemala’s Ministry of Agriculture site has a

webshots.com page embedded in their government web page that shows albums documenting the programs they put on and their service projects. Turkey's Portal has webcams of streets and squares all around the country on a live feed via the internet.

Peru's Portal site has an interactive online video that shows a mouse clicking on different things and what each click would accomplish plus a tutorial showing how to navigate pages while a voiceover explains the different services. Ecuador's President site has a youtube.com website with videos and an entire user profile for the President of the country. Czech Republic's Portal site has a new "Did you know?" fact at the top of each page. The page contains a unique "conversation bubble" theme that allows for links to interesting services and a "quick review" that gives current time and date, weather, and exchange information at a glance. India's Department of Commerce site holds regular online chat sessions, with pre-designated topics either a few times a week or daily for one hour. They broadcast the topics and their schedule on a scrolling banner at the top of the webpage for every visitor to see.

One feature that has slowed the development of online services has been an inability to use credit cards and digital signatures on financial transactions. On commercial sites, it is becoming a more common practice to offer goods and services online for purchase through the use of credit cards. However, of the government websites analyzed, only 5 percent accept credit cards and 1 percent allowed digital signatures for financial transactions, similar to last year.

Privacy and Security

Having visible statements outlining what the site is doing on privacy and security are valuable assets for reassuring a fearful population to make use of e-government services and information. However, few global e-government sites offer policy statements dealing with these topics. Only 29 percent (up from 26 percent in 2006) of examined sites have some form of privacy policy on their site, and 21 percent have a visible security policy (up from 14 percent). Both of these are areas that government officials need to take much more seriously. Unless ordinary citizens feel safe and secure in their online information and service activities, e-government is not going to grow very rapidly.

	2001	2002	2003	2004	2005	2006	2007
Privacy	6%	14%	12%	14%	18%	26%	29
Security	3	9	6	8	10	14	21

In order to assess particular aspects of privacy and security, we evaluated the content of these publicly posted statements. For privacy policies, we look at several features: whether the privacy statement prohibits commercial marketing of visitor information; use of cookies or individual profiles of visitors; disclosure of personal information without the prior consent of the visitor, or disclosure of visitor information with law enforcement agents.

In general, we found weak protections of visitor privacy. For example, only 22 percent of government websites prohibit the commercial marketing on visitor information; just nine percent prohibit cookies, 22 percent prohibit sharing personal information, and 12 percent share information with law enforcement agents. And in regard to security policies, 15 percent indicate that they use computer software to monitor traffic.

Disability Access

We tested disability access by examining the actual accessibility of government websites through the automated "Bobby 5.0" software produced by Watchfire, Inc. (<http://bobby.watchfire.com>). This commercial firm offers software that tests websites against

standards of compliance with the standards recommended by the World Wide Web Consortium (W3C).

For our test, we used the Priority Level One standard and evaluated each government agency regarding whether it complies with the W3C guidelines. Sites are judged to be either in compliance or not in compliance based on the results of this test. According to our Bobby analysis, 23 percent of government websites are accessible to the disabled, the same as last year.

	2004	2005	2006	2007
Disability Access	14%	19%	23%	23%

Foreign Language Access

Sixty-two percent of national government websites have foreign language features that allow access to non-native speaking individuals, up from 52 percent last year. By foreign language feature, we mean any accommodation to the non-native speakers in a particular country, such as text translation into a different language. Many have no language translation on their site other than their native tongue. Seventy-nine percent offer at least some portion of their websites in English (up from 78 percent in 2006).

	2001	2002	2003	2004	2005	2006	2007
Foreign Language Translation	45%	43%	51%	50%	49%	52%	62%

Ads, User Fees, and Premium Fees

Many nations are struggling with the issue of how to pay for electronic governance. When defining an advertisement, we eliminate computer software available for free download (such as Adobe Acrobat Reader, Netscape Navigator, and Microsoft Internet Explorer) since they are necessary for viewing or accessing particular products or publications. Links to commercial products or services available for a fee were included as advertisements as were banner, pop-up, and fly-by advertisements.

As shown below, only 5 percent of government websites in 2007 rely on ads. Several trade/investment promotion agencies have sites with ads, including Mongolia and Nepal. Tourism sites frequently contain ads, such as a link to Accor Hotels on the Netherlands tourism site. Less benign are the more overtly commercial ads, such as a Peugeot car ad on the Comoros portal. Other ads include a link to an African news portal on the Chad government website, a link to a Telecommunications company on a Kiribati site, a link to a Data Center on the Philippines Department of Justice website, banner ads on Venezuela's Ministry of Science and Technology, a link to copaamerica.com which is a private soccer site on Venezuela's Ministry of Popular Support for the Environment website and its Ministry of Foreign Affairs website, the private news agency AVN News on Vietnam's News Agency, banner ads for Sheraton Hotels, Long Cho Beach Resort, Park Hyatt, and Furama Resort on the Vietnam National Tourism Administration, a link to United Airlines on Vietnam's General Statistics Office, a private company Comport on the Albanian Institute of Public Relation site, a link to Passion.com which provides "sexy personals for passionate singles" on Bolivia's Portal, and several banner ads for tourist attractions on Mexico's Ministry of Tourism site.

	2001	2002	2003	2004	2005	2006	2007
Ads	4%	8%	2%	4%	4%	3%	5%
User Fees	--	1	0.2	1.3	2	1	1
Premium Fees	--	0	0.2	0.7	1	0.2	2

In general, user fees remain relatively scarce among the sites we examined. Most services and databases could be completed or obtained by mail or in person at no additional charge. The few that were found (1 percent of all sites) included charges applied in order to access publications or databases, or to register for a particular database. Two percent of sites had premium sections that charged fees.

The Malta Environment and Planning Authority had a unique way of handling fees. You purchase “credit” in varying amounts, allowing for either 1, 20, 50 or 100 transactions (approximately – it seems most fees are set at 1.16 euros, but not all). These services include: “Site Plans, Case Officer Reports and Decision Notices”. The Republic of Congo portal offers a way to send SMS text messages via its website, for a small fee. Several sites charge for a paper delivery of reports and publications. This includes the French Statistics Ministry, and the Swiss Office of Topography. Industry Canada has a (\$) next to all the online services that have an associated processing fee, such as fees for insolvency name search, unclaimed dividends search, Canadian international merchandise services, and written opinions from the competition bureau, a \$3 charge to download data from National Statistics Canada, and a processing fee of about \$412 for applications submitted to register trademarks at Hungary’s Patent Office. The Nigerian Corporate Affairs Commission uses a document management system that requires a premium fee through an “e-Payment” card, which can be purchased from several bank branches.

Public Outreach

E-government offers the potential to bring citizens closer to their governments. Regardless of the type of political system that a country has, the public benefits from interactive features that facilitate communication between citizens and government. In our examination of national government websites, we look for various features that would help citizens contact government officials and make use of information on websites.

Email is an interactive feature that allows ordinary citizens to pose questions of government officials or request information or services. In our study, we find that 86 percent of government websites offered email contact material so that a visitor could email a person in a particular department other than the Webmaster.

Percentage of Government Websites Offering Public Outreach

	2001	2002	2003	2004	2005	2006	2007
<i>Email</i>	73%	75%	84%	88%	80%	91%	86%
<i>Search</i>	38	54	--	--	--	--	--
<i>Comments</i>	8	33	31	16	37	33	42
<i>Email Updates</i>	6	10	12	16	16	19	21
<i>Broadcast</i>	2	2	--	--	--	--	--
<i>Website Personalization</i>	--	1	1	2	2	6	7
<i>PDA Access</i>	--	--	2	1	4	1	4

Forty-two percent offer areas to post comments (other than through email), the use of message boards, and chat rooms, up from 33 percent the preceding year. Websites using these features allow citizens and department members alike to read and respond to others’ comments regarding issues facing the department.

Twenty-one percent of government websites allow citizens to register to receive updates regarding specific issues. With this feature, web visitors can input their email addresses, street addresses, or telephone numbers to receive information about a particular subject as new information becomes available. The information can be in the form of a monthly e-newsletter highlighting a prime

minister's views or in the form of alerts notifying citizens whenever a particular portion of the website is updated.

Seven percent of sites allow websites to be personalized to the interests of the visitor, and four percent provide personal digital assistant (PDA) access. Some sites have started to take advantage of mobile phone access (WAP). This is a good way to adapt local technology to digital access.

Top E-Government Countries

In order to see how the 198 nations ranked overall, we create a 0 to 100 point e-government index and apply it to each nation's websites based on the availability of publications, databases, and number of online services. Four points are awarded to each website for the presence of the following features: publications, databases, audio clips, video clips, foreign language access, not having ads, not having premium fees, not having user fees, disability access, having privacy policies, security policies, allowing digital signatures on transactions, an option to pay via credit cards, email contact information, areas to post comments, option for email updates, option for website personalization, and PDA accessibility. These features provide a maximum of 72 points for particular websites.

Each site then qualifies for a bonus of 28 points based on the number of online services executable on that site (one point for one service, two points for two services, three points for three services, and on up to twenty-eight points for twenty-eight or more services). The e-government index runs along a scale from zero (having none of these features and no online services) to 100 (having all features plus at least 28 online services). Totals for each website within a country were averaged across all of that nation's websites to produce a zero to 100 overall rating for that nation.

The top country in our ranking is South Korea at 74.9 percent. This means that every website we analyzed for that nation has nearly three-quarters of the features important for information availability, citizen access, portal access, and service delivery. Other nations that score well on e-government include Singapore, Taiwan, the United States, Great Britain, Canada, Portugal, Australia, Turkey, and Germany. The Appendix lists e-government scores for each of the 198 countries, plus comparisons between 2006 and 2007.

Differences by Region of World

There are some differences in e-government by region of the world. In looking at the overall e-government scores by region, North America scores the highest (45.3 percent), followed by Asia (39.5 percent), Western Europe (36.8 percent), Pacific Ocean Islands (33.8 percent), Middle East (33.5 percent), Eastern Europe (31.7 percent), South America (32.1 percent), Central America (29.2 percent), Russia and Central Asia (27.8 percent), and Africa (26.0 percent).

E-Government Ratings by Region

	2001	2002	2003	2004	2005	2006	2007
North America	51.0%	60.4%	40.2%	39.2%	47.3%	43.1	45.3
Western Europe	34.1	47.6	33.1	30.0	29.6	35.2	36.8
Eastern Europe	--	43.5	32.0	28.0	27.1	29.2	31.7
Asia	34.0	48.7	34.3	31.6	37.3	35.9	39.5
Middle East	31.1	43.2	32.1	28.1	27.4	29.4	33.5
Russia/Central Asia	30.9	37.2	29.7	25.3	25.0	30.6	27.8
South America	30.7	42.0	29.5	24.3	25.9	28.0	32.1
Pacific Ocean Islands	30.6	39.5	32.1	29.9	27.9	32.4	33.8
Central America	27.7	41.4	28.6	24.1	24.1	25.0	29.2
Africa	23.5	36.8	27.6	22.0	22.0	24.3	26.0

Conclusion

There are a number of technical problems in accessing government websites around the world. Some government pages such as Nepal's Ministry of Industry and Commerce and Morocco's Directorate of Statistics no longer exist but remain on the site. Most troubling are pages that have been taken over by non-affiliated and/or commercial entities, such as the websites of Chad Embassy and the Libyan U.N. Mission. Some sites had broken links (such as Papua New Guinea's portal) or pages that are slow to load (the Mongolia Tourism site).

Most pages displayed some consistency in their navigation scheme, but there were exceptions. On Pakistan's Institute of Oceanography, the navigation bar running across the top is either different or absent on interior pages. There is a list of links along of the bottom of the page, but this is easy to miss. Pages should maintain a rigid consistency across all of their interior pages, allowing to user easy navigation. Some pages try to cram too much text on a page. The Cameroon portal is an example of this phenomenon. A widespread problem in some nations is outdated information. For example, the site of the Laos Embassy has a most recent copyright date of 2000, and the latest new story is from 2003.

Tonga's Portal site has links in the upper right hand corner, such as "terms of use," "contact us," "quick facts," "about us," and "welcome," which do not work when you click on them. Tuvalu's Portal site has a "Contact Us" link, but when you click on it, there is no contact information, no email addresses, and no form for submitting information. Venezuela's Ministry of Foreign Affairs has sections that are restricted by an email and password requirement, but when you attempt to register, it takes you back to the home page without enabling visitors to register. Mexico's Agriculture/Hunting/Fishing/Rural Development site has a link that says "English" but there is no English on the ensuing text. Dominican Republic's Sugar Institute site's feedback and privacy policy links open blank pages.

Botswana's Portal stopped working in the middle of the evaluation. The previous link to Cyprus (Turkish Republic) appears to have sold their domain name to a commercial site. Britain's Monarchy site claims to meet the Bobby disability test, but it did not do so in our test of the site. East Timor's Ministry of Justice website is for sale by a "government foreclosure" company.

The ultimate goal of e-government is too provide citizens with services. To this effect, sites need to be well-designed, easy to navigate, and accessible to a wide variety of users. This should be the first task of anyone in charge of an e-government. A site may have a multitude of great services, but if the pages are inaccessible and impossible to navigate, few users will be able to take full advantage of these services.

1) Standardize templates with consistent navigation

Governments should move toward standardization among various agency websites. This allows the user, who will probably visit several agencies while online, to remained oriented. The ultimate application of this concept can be seen on government sites such as that of Australia (<http://www.australia.gov.au/>), which has adopted the same template for every agency, or Sweden, who contains every agency within its portal page. In cases such as these, it is important to differentiate among the various agencies in other ways. This can be done by prominently featuring the agency logo, and instituting large color palette changes between sites.

2) Create accessibility aids

The most basic means to ensure accessibility is to maintain compliance with WWC standards. However, there now exist other ways to aid accessibility. Many sites now allow users to change the size on the text, to accommodate those with poor eyesight. Other pages have applications that will read the entire page to the user. The most extreme example of this trend can be seen on the Swedish Government Portal (<http://www.sweden.gov.se/>), which not only will read to page to you, but lets you customize the text size, spacing, and coloring. Advances in technology have made these types of aids possible, and government website should begin implementing them

3) *List when pages are updated*

One of the more widespread problems with global e-government is the out-dated nature of many government pages. In order to help users who are searching these pages, government websites should notate when each page was last updated. Many Swiss Government sites, such as that of the Ministry of Defense (<http://www.vbs.admin.ch/>) do this.

4) *Have personalized sections*

It is very helpful when websites had personalized sections of their sites for particular segments of the population, such as “citizen”, “business”, “tourist”, and “student”. Many health sites had sections for teenagers, children, adults, and seniors. Some education sites had sections for educators, students, prospective students, etc. These make for an efficient navigating experience because they predict the interests of their audience and therefore expedite the search process. The Belgian Portal (<http://www.belgium.be>) is an excellent example of personalized sections.

5) *Have an online services menu*

List everything that can be accomplished entirely online in the same place. Services should also be listed based on the category to which they belong (e.g. driver’s license renewal under the motor vehicle dept. pages and passport renewal under the immigration/travel pages.) But if it can be done online, have it grouped together with all the other online services as well in an at-a-glance format. Having services listed twice in this fashion would make it easy for people who use the portal to locate services *and* for those who skip the portal and head directly to more specialized pages. Creating a master list of services is a simple and effective means of avoiding this problem. One of the main tabs on the Australia Portal deals just with “Online Services”. In addition, it is useful to separate full executable online services, from downloaded forms. The Malaysian Portal is very good about doing this.

6) *Make “Most popular” list*

Chances are most users use the same three or four services on any given website. Taking this into account, providing a box that lists the top five or top ten most requested services would help users quickly find what they are searching for. The U.S. Small Business Administration has a form of this on their site.

7) *Have interactive technological assistance.*

There are two websites whose navigation assistance programs stood out as superior: Peru’s Portal and Mexico’s Ministry of the Economy site. Peru has a very clear, pause-able video that showed an actual computer screen as it was navigated by a mouse and thoroughly explained. Mexico’s Ministry of the Economy allows users to have an instant message conversation with a service representative to ask questions about how to use the website during most office hours. This service was also provided by some of the U.S. Federal Government websites. No matter how advanced technology gets, people still want to talk to real individuals. Virtual paperclips or other assistance characters are really just advanced search engines that are not very helpful. Better help sections on government websites means more people will have their questions answered. There needs to be more than just FAQs.

8) *Make it interesting!*

Although more pizzazz doesn’t always mean more customer satisfaction, skimpy-looking websites make accessing information harder to do. Pictures, sound clips, videos, and random facts (with corresponding links to more information/services) increase the ease with which people can find what they’re looking for. See the Czech Republic Portal for an example of a well-balanced page. Clutter should also be avoided, but there are more sites that are under-done than over-done. Aesthetics are important for online navigation.

9) *Avoid commercial advertising*

Banner advertisements automatically bring down a government web page’s credibility and appeal. Citizens seeking out the government for help, services, or information, do not want to be “pitched to” in any way! Additionally, government links that are designed to look like banner ads (flashing boxes with bright, sometimes scrolling words) are unnerving. There are better ways to

highlight particular services than to make them look like banner ads. It makes it look like those links are not part of the information on the page and are just ads that can be skimmed over or ignored.

10) Fix faulty links

Few things are more frustrating than when there appears to be a link to a privacy policy but nothing happens when that link is clicked on. No link should be put in place without the linked page already created. All the nonfunctional links should be fixed and all the information that is supposed to be there should be there!

11) Improve language accessibility

A major problem is with language barriers. There remain many countries that do not yet provide access in non-native languages. This limits the usefulness of government websites.

12) Do not sell domain names

Some countries sell agency domain names and the new site becomes a scam, advertisement, or phony website. This is dangerous to unsuspecting visitors who do not know the difference between the old and new sites.

13) Have a secure and stable server

The only thing more frustrating than links that don't work are URLs that don't work. Although there's no guarantee, a secure server is the best way to ensure that people don't get kicked off the site and the pages load properly.

Appendix

Table A-1 E-Government Country Rankings, 2007 (with 2006 in parentheses)

Rank	Nation	Rating Out of 100 Pts	Rank	Nation	Rating Out of 100 Pts
1. (1)	South Korea	74.9 (60.3)	2. (3)	Singapore	54.0 (47.5)
3. (2)	Taiwan	51.1 (49.8)	4. (4)	United States	49.4 (47.4)
5. (6)	Great Britain	44.3 (42.6)	6. (5)	Canada	44.1 (43.5)
7. (48)	Portugal	43.8 (31.3)	8. (12)	Australia	43.5 (39.9)
9. (27)	Turkey	43.5 (33.7)	10. (8)	Germany	42.9 (41.5)
11. (7)	Ireland	42.4 (41.9)	12. (16)	Switzerland	42.3 (36.9)
13. (38)	Brazil	41.1 (32.1)	14. (11)	Dominica	41.0 (40.0)
15. (65)	Bahrain	40.3 (29.6)	16. (32)	Liechtenstein	40.0 (33.0)
17. (40)	Equatorial Guinea	40.0 (32.0)	18. (133)	Andorra	39.0 (24.0)
19. (14)	New Zealand	38.4 (37.6)	20. (35)	Italy	38.0 (32.9)
21. (10)	Spain	37.7 (40.6)	22. (20)	Hong Kong	37.5 (35.4)
23. (19)	Finland	37.3 (35.6)	24. (30)	Vatican	37.0 (33.5)
25. (36)	Malaysia	36.9 (32.7)	26. (15)	Netherlands	36.8 (37.4)
27. (46)	Czech Republic	36.7 (31.7)	28. (106)	Brunei	36.5 (26.8)
29. (84)	Cyprus (Republic)	36.4 (28.3)	30. (40)	Liberia	36.0 (24.0)
31. (56)	Austria	36.0 (30.6)	32. (17)	Azerbaijan	36.0 (36.0)
33. (143)	Sierra Leone	36.0 (24.0)	34. (39)	Bhutan	36.0 (32.0)
35. (175)	Costa Rica	36.0 (20.0)	36. (73)	Eritrea	36.0 (29.0)

37. (166)	Ethiopia	36.0 (22.0)	38. (137)	Gabon	36.0 (24.0)
39. (17)	North Korea	36.0 (36.0)	40. (9)	Japan	35.9 (41.5)
41. (28)	Malta	35.8 (33.6)	42. (24)	Qatar	35.6 (34.5)
43. (23)	France	35.6 (34.7)	44. (67)	Israel	35.5 (29.4)
45. (88)	Croatia	35.0 (28.0)	46. (51)	Iceland	34.6 (31.1)
47. (77)	India	34.2 (28.7)	48. (54)	Peru	34.0 (30.8)
49. (150)	Zambia	34.0 (23.5)	50. (68)	Mexico	33.9 (29.3)

Rank	Nation	Rating Out of 100 Pts	Rank	Nation	Rating Out of 100 Pts
51. (76)	China (People's Republic)	33.7 (28.8)	52. (66)	Arab Emirates	33.6 (29.5)
53. (58)	Hungary	33.3 (30.5)	54. (119)	Armenia	33.3 (25.3)
55. (112)	Argentina	33.1 (26.1)	56. (104)	Panama	33.1 (27.0)
57. (28)	Kazakhstan	33.0 (33.6)	58. (50)	Syria	32.8 (31.2)
59. (80)	Colombia	32.8 (28.6)	60. (13)	Sweden	32.7 (38.3)
61. (63)	Poland	32.7 (30.1)	62. (49)	Serbia and Montenegro	32.4 (31.2)
63. (21)	Norway	32.4 (35.0)	64. (44)	Denmark	32.1 (31.8)
65. (110)	Jamaica	32.1 (26.4)	66. (55)	Luxembourg	32.1 (30.7)
67. (31)	Libya	32.0 (33.0)	68. (41)	Monaco	32.0 (32.0)
69. (134)	Bahamas	32.0 (24.0)	70. (116)	St. Vincent and the Grenadines	32.0 (26.0)
71. (26)	Swaziland	32.0 (34.0)	72. (97)	Tajikistan	32.0 (28.0)
73. (162)	Botswana	32.0 (22.0)	74. (89)	Cyprus (Turkish Rep.)	32.0 (28.0)
75. (90)	Ghana	32.0 (28.0)	76. (190)	Grenada	32.0 (16.0)
77. (93)	Guinea-Bissau	32.0 (28.0)	78. (139)	Guyana	32.0 (24.0)
79. (81)	Kuwait	31.9 (28.5)	80. (79)	Lebanon	31.5 (28.7)
81. (61)	Egypt	31.3 (30.2)	82. (45)	Slovenia	31.3 (31.8)
83. (101)	East Timor	31.2 (27.4)	84. (100)	Kenya	31.2 (27.5)
85. (161)	Belize	31.0 (22.0)	86. (113)	Bulgaria	31.0 (26.0)
87. (155)	Cambodia	31.0 (23.2)	88. (34)	Chile	31.0 (32.9)
89. (98)	Saudi Arabia	30.9 (27.9)	90. (126)	Vietnam	30.9 (25.0)
91. (85)	Oman	30.9 (28.1)	92. (82)	Belgium	30.8 (28.4)
93. (152)	Trinidad and Tobago	30.8 (23.4)	94. (92)	Guatemala	30.8 (28.0)
95. (102)	Iran	30.7 (27.3)	96. (59)	Philippines	30.5 (30.4)
97. (145)	Saint Kitts and	30.3 (24.0)	98. (62)	Romania	30.1 (30.2)

	Nevis				
99. (188)	Lesotho	30.0 (16.7)	100. (146)	Suriname	30.0 (24.0)

Rank	Nation	Rating Out of 100 Pts	Rank	Nation	Rating Out of 100 Pts
101. (163)	Cape Verde	30.0 (22.0)	102. (164)	Cook Islands	30.0 (22.0)
103. (37)	Slovakia	29.8 (32.3)	104. (71)	Bosnia and Herzegovina	29.8 (29.1)
105. (148)	Antigua and Barbuda	29.7 (23.7)	106. (74)	Maldives	29.6 (29.0)
107. (78)	Jordan	29.6 (28.7)	108. (60)	Nepal	29.6 (30.3)
109. (129)	San Marino	29.3 (24.3)	110. (57)	Latvia	29.0 (30.6)
111. (53)	Saint Lucia	29.0 (31.0)	112. (183)	Vanuatu	29.0 (20.0)
113. (125)	Congo (Republic)	29.0 (25.0)	114. (83)	Lithuania	28.7 (28.3)
115. (22)	Ukraine	28.4 (35.0)	116. (131)	Uruguay	28.4 (24.2)
117. (52)	Nigeria	28.3 (31.1)	118. (169)	Micronesia	28.0 (21.0)
119. (75)	Mongolia	28.0 (29.0)	120. (142)	Mozambique	28.0 (24.0)
121. (180)	Niue	28.0 (20.0)	122. (167)	Samoa	28.0 (22.0)
123. (173)	Barbados	28.0 (20.0)	124. (96)	Sri Lanka	28.0 (28.0)
125. (132)	Albania	28.0 (24.0)	126. (135)	Congo (Democratic Republic)	28.0 (24.0)
127. (107)	Angola	28.0 (26.7)	128. (25)	Estonia	28.0 (34.0)
129. (138)	Gambia	28.0 (24.0)	130. (94)	Haiti	28.0 (28.0)
131. (130)	Iraq	28.0 (27.0)	132. (159)	Kyrgyzstan	28.0 (22.4)
133. (43)	Russian Federation	27.8 (31.9)	134. (130)	Morocco	27.8 (24.2)
135. (72)	Pakistan	27.7 (29.1)	136. (70)	South Africa	27.7 (29.2)
137. (99)	Ecuador	27.6 (27.5)	138. (91)	Greece	27.1 (28.0)
139. (123)	Paraguay	27.0 (25.3)	140. (47)	Georgia	27.0 (31.4)
141. (121)	Fiji	26.8 (25.3)	142. (107)	Afghanistan	26.7 (26.7)
143. (69)	Sudan	26.7 (29.3)	144. (117)	Zimbabwe	26.7 (26.0)
145. (109)	Benin	26.7 (26.7)	146. (158)	Uganda	26.2 (22.5)
147. (177)	Madagascar	26.0 (20.0)	148. (64)	Belarus	26.0 (30.0)
149. 165)	Dominican Republic	26.0 (22.0)	150. (124)	Senegal	25.7 (25.1)

Rank	Nation	Rating Out of 100 Pts	Rank	Nation	Rating Out of 100 Pts
151. (105)	Uzbekistan	25.7 (27.0)	152. (120)	El Salvador	25.6 (25.3)
153. (115)	Nicaragua	25.2 (26.0)	154. (160)	Djibouti	24.9 (22.1)
155. (149)	Mauritius	24.7 (23.7)	156. (86)	Bangladesh	24.7 (28.0)
157. (118)	Seychelles	24.7 (25.5)	158. (128)	Algeria	24.6 (30.3)
159. (156)	Venezuela	24.3 (23.2)	160. (178)	Mali	24.0 (20.0)
161. (195)	Nauru	24.0 (16.0)	162. (181)	Palau	24.0 (20.0)
163. (185)	Soloman Islands	24.0 (18.0)	164. (144)	Somalia	24.0 (24.0)
165. (193)	Togo	24.0 (16.0)	166. (87)	Bolivia	24.0 (28.0)
167. (198)	Burundi	24.0 (8.0)	168. (136)	Cote d'Ivoire	24.0 (24.0)
169. (157)	Cuba	24.0 (22.7)	170. (176)	Indonesia	24.0 (20.0)
171. (171)	Honduras	23.0 (20.8)	172. (153)	Yemen	22.9 (23.4)
173. (172)	Malawi	22.7 (20.7)	174. (197)	Chad	22.7 (9.0)
175. (111)	Tunisia	22.4 (26.4)	176. (95)	Laos	22.0 (28.0)
177. (154)	Rwanda	21.9 (23.3)	178. (151)	Thailand	21.7 (23.4)
179. (168)	Namibia	21.5 (21.4)	180. (184)	Cameroon	21.3 (19.0)
181. (33)	Macedonia	20.0 (33.0)	182. (126)	Marshall Islands	20.0 (25.0)
183. (141)	Moldova	20.0 (24.0)	184. (122)	Myanmar	20.0 (25.3)
185. (179)	Niger	20.0 (20.0)	186. (170)	Papua New Guinea	20.0 (21.0)
187. (192)	Sao Tome and Principe	20.0 (16.0)	188. (182)	Somaliland	20.0 (20.0)
189. (194)	Tonga	20.0 (16.0)	190. (147)	Turkmanistan	20.0 (24.0)
191. (187)	Burkina Faso	20.0 (17.0)	192. (189)	Central Africa Republic	20.0 (16.0)
193. (187)	Tanzania	18.3 (17.5)	194. (114)	Mauritania	18.0 (26.0)
195. (39)	Tuvalu	16.0 (32.0)	196. (174)	Comoros	12.0 (20.0)
197. (191)	Guinea	12.0 (16.0)	198. (195)	Kiribati	8.0 (12.0)

Table A-2 Individual Country Profiles for Selected Features, 2007

	<i>Online Services</i>	<i>Publications</i>	<i>Data bases</i>	<i>Privacy Policy</i>	<i>Security Policy</i>	<i>W3C Disability Accessibility</i>
Afghanistan	0%	100%	33%	0%	0%	0%
Albania	0	100	67	0	0	0

Algeria	0	93	0	0	0	0
Andorra	100	100	100	100	100	0
Angola	0	100	0	100	0	0
Antigua	50	100	83	17	17	0
Arab Emirates	25	92	75	0	0	8
Argentina	50	100	100	21	21	7
Armenia	25	100	100	0	0	0
Australia	53	97	57	100	97	73
Austria	60	100	80	20	0	80
Azerbaijan	0	100	0	0	0	0
Bahamas	0	100	100	0	0	0
Bahrain	50	88	88	0	0	0
Bangladesh	0	100	50	0	0	0
Barbados	0	100	100	0	0	0
Belarus	0	100	100	0	0	0
Belgium	18	100	9	45	18	45
Belize	0	100	50	25	0	0
Benin	0	100	33	0	0	0
Bhutan	0	100	100	100	0	0
Bolivia	0	100	100	0	0	0
Bosnia	25	100	75	0	0	0
Botswana	0	75	75	0	0	50
Brazil	88	100	100	6	6	6
Brunei	25	100	75	50	25	0
Bulgaria	0	75	100	0	0	0
Burkina Faso	0	100	75	0	0	0
Burundi	0	100	0	0	0	0
Cambodia	0	100	100	0	0	0
Cameroon	0	100	33	0	0	0
Canada	66	100	97	97	48	62
Cape Verde	0	100	100	0	0	50
Central Africa	0	0	0	0	0	0
Chad	0	100	67	0	0	67
Chile	50	93	79	21	21	7
China- Mainland	43	100	100	0	0	0
Republic of China -Taiwan	50	100	100	100	100	50
Colombia	80	100	100	40	20	0
Comoros	0	100	0	0	0	0
Congo-Dem Rep	0	100	100	0	0	0
Congo-Rep	100	100	100	0	0	0
Cook Islands	0	100	100	0	0	0
Costa Rica	0	100	100	0	0	0
Cote d'Ivoire	0	100	50	0	0	0
Croatia	60	100	80	20	20	0
Cuba	13	100	88	0	0	11
Cyprus-Rep	63	100	100	13	13	63

Cyprus-Turk	0	100	100	0	0	0
Czech Rep	23	100	100	15	15	69
Denmark	7	100	79	7	0	50
Djibouti	0	78	100	0	0	0
Dominica	100	100	100	100	0	0
Dominican Rep	0	100	100	0	0	0
East Timor	0	100	80	40	40	20
Ecuador	0	100	91	9	0	0
Egypt	27	87	80	20	13	0
El Salvador	50	100	63	0	0	0
Eq Guinea	0	100	100	0	0	0
Eritrea	0	100	100	0	0	0
Estonia	0	100	100	0	0	0
Ethiopia	0	100	100	0	0	0
Fiji	0	100	60	0	0	0
Finland	23	100	77	54	31	62
France	24	100	97	28	10	28
Gabon	0	100	100	0	0	0
Gambia	0	100	75	0	0	25
Georgia	0	100	100	0	0	0
Germany	75	100	88	63	13	0
Ghana	0	100	100	0	0	0
Great Britain	59	96	89	89	67	70
Greece	13	88	88	13	13	0
Grenada	0	100	100	0	0	0
Guatemala	50	100	100	25	25	0
Guinea	0	0	0	0	0	0
Guinea-Bissau	0	100	100	0	0	0
Guyana	0	100	100	0	0	0
Haiti	0	100	0	0	0	0
Honduras	14	100	43	0	0	0
Hong Kong	28	100	100	22	0	67
Hungary	33	100	100	17	8	17
Iceland	6	100	83	6	6	83
India	39	100	100	6	6	6
Indonesia	0	100	100	0	0	0
Iran	0	100	100	100	0	0
Iraq	0	100	38	8	8	0
Ireland	11	100	83	100	100	78
Israel	25	100	94	44	0	13
Italy	14	100	86	14	0	71
Jamaica	6	100	82	29	12	12
Japan	5	100	95	45	45	55
Jordan	29	100	86	0	0	0
Kazakhstan	50	100	100	0	0	0
Kenya	50	90	80	0	0	0
Kiribati	0	0	0	0	0	0
Korea, North	100	100	100	0	0	0
Korea, South	100	100	100	100	100	0

Kuwait	18	91	82	9	9	0
Kyrgyzstan	0	100	100	0	0	0
Laos	0	100	50	0	0	0
Latvia	0	88	13	0	0	13
Lebanon	18	100	73	0	0	9
Lesotho	0	75	50	0	0	50
Liberia	0	100	100	0	0	0
Libya	0	100	100	0	0	0
Liechtenstein	0	100	100	100	0	0
Lithuania	0	100	55	9	0	0
Luxembourg	6	94	44	50	22	50
Macedonia	0	100	0	0	0	0
Madagascar	0	100	50	0	0	0
Malawi	0	100	67	0	0	0
Malaysia	63	100	25	38	38	0
Maldives	0	100	60	20	20	20
Mali	0	100	0	0	0	0
Malta	60	100	40	60	60	40
Marshall Islands	0	0	0	0	0	0
Mauritania	0	50	0	0	0	0
Mauritius	8	100	69	8	8	0
Mexico	68	100	100	37	26	5
Micronesia	0	100	100	0	0	100
Moldova	0	100	0	0	0	0
Monaco	0	100	0	50	0	0
Mongolia	0	100	25	0	0	0
Morocco	25	100	88	0	0	13
Mozambique	0	100	100	0	0	0
Myanmar	0	100	0	0	0	0
Namibia	8	100	55	0	0	0
Nauru	0	0	100	0	0	100
Nepal	0	94	89	0	0	17
Netherlands	24	100	92	36	20	64
New Zealand	25	100	96	79	54	71
Nicaragua	36	91	91	0	0	0
Niger	0	0	100	0	0	0
Nigeria	29	100	86	14	0	14
Niue	0	100	100	0	0	0
Norway	7	97	57	0	0	50
Oman	25	100	75	0	0	0
Pakistan	18	100	87	23	14	0
Palau	0	100	100	0	0	0
Panama	40	100	87	60	60	0
Papua New Guinea	0	56	67	11	11	11
Paraguay	18	100	91	0	0	0
Peru	18	100	91	0	0	0
Philippines	55	100	90	45	15	10

Poland	0	100	83	4	4	21
Portugal	79	100	100	79	32	0
Qatar	18	100	45	9	0	0
Romania	0	100	88	0	0	0
Russia	0	100	94	0	6	0
Rwanda	11	100	33	0	0	0
Sao Tome	0	0	0	100	0	0
St. Kitts/Nevis	25	100	100	25	50	0
St. Lucia	0	100	25	25	25	50
St. Vincent	0	100	50	50	0	0
Samoa	0	100	75	25	25	25
San Marino	0	67	67	0	33	0
Saudi Arabia	14	93	79	7	0	7
Senegal	0	100	100	43	0	0
Serbia and Montenegro	8	100	77	0	0	0
Seychelles	0	100	67	0	0	33
Sierra Leone	0	100	100	0	0	0
Singapore	73	100	100	100	100	47
Slovakia	11	95	74	5	5	21
Slovenia	7	100	78	15	11	7
Solomon Islands	0	100	100	0	0	0
Somalia	0	100	0	0	0	0
Somaliland	0	100	0	0	0	0
South Africa	24	100	90	21	14	7
Spain	55	100	100	55	32	59
Sri Lanka	0	100	100	0	0	0
Sudan	0	100	33	0	0	33
Suriname	0	100	50	0	0	0
Swaziland	0	100	50	50	50	0
Sweden	50	100	81	4	4	69
Switzerland	46	100	100	81	85	58
Syria	0	100	80	0	0	0
Tajikistan	0	100	100	0	0	0
Tanzania	0	24	14	0	0	0
Thailand	0	86	43	0	0	0
Togo	0	100	0	0	0	0
Tonga	0	100	0	0	0	0
Trinidad	15	92	46	31	15	0
Tunisia	0	40	40	0	0	0
Turkey	100	96	100	26	22	4
Turkmenistan	0	100	0	0	0	0
Tuvalu	0	0	0	0	0	100
Uganda	0	67	33	0	0	0
Ukraine	0	100	100	0	0	0
United States	59	100	98	84	80	54
Uruguay	36	100	82	27	27	0
Uzbekistan	33	100	100	0	0	0

Vanuatu	100	100	100	0	0	0
Vatican	100	100	100	0	0	0
Venezuela	11	100	100	0	0	0
Vietnam	22	89	100	0	0	33
Yemen	0	71	71	0	0	0
Zambia	0	100	100	0	0	0
Zimbabwe	0	67	67	0	0	33

Table A-3 Individual Country Profiles for Selected Features, 2007

	<i>For Lang</i>	<i>Ads</i>	<i>User Fee</i>	<i>Comme nts</i>	<i>Updates</i>	
Afghanistan	67%	0%	0%	0%	33%	
Albania	100	0	0	9	9	
Algeria	100	11	0	33	22	
Andorra	100	100	0	0	0	
Angola	0	0	0	0	0	
Antigua	0	0	0	67	0	
Arab Emirates	50	0	17	67	25	
Argentina	0	0	0	36	7	
Armenia	100	0	0	50	0	
Australia	3	0	0	47	53	
Austria	80	0	0	60	0	
Azerbaijan	100	0	0	100	0	
Bahamas	0	0	0	100	0	
Bahrain	88	0	0	88	38	
Bangladesh	83	0	0	17	0	
Barbados	0	0	0	33	0	
Belarus	67	33	0	67	0	
Belgium	36	0	0	18	55	
Belize	100	0	0	50	25	
Benin	33	0	0	67	0	
Bhutan	100	0	0	100	0	
Bolivia	0	100	0	0	0	
Bosnia	100	0	0	25	25	
Botswana	100	0	0	25	25	
Brazil	50	0	19	50	38	
Brunei	100	0	0	75	0	
Bulgaria	100	0	0	50	25	
Burkina Faso	0	0	0	0	0	
Burundi	0	0	0	0	100	
Cambodia	100	0	0	75	0	
Cameroon	0	0	0	33	0	
Canada	100	0	7	48	34	
Cape Verde	0	0	0	50	0	
Central Africa	0	0	0	0	0	
Chad	33	70	0	0	0	
Chile	7	21	0	7	21	
China-	65	9	0	65	26	

Mainland						
Republic of China -Taiwan	100	0	0	46	46	
Colombia	0	20	0	60	40	
Comoros	0	100	0	0	0	
Congo-Dem Rep	100	0	0	0	0	
Congo-Rep	0	100	100	100	0	
Cook Islands	100	0	0	50	0	
Costa Rica	0	100	0	100	100	
Cote d'Ivoire	0	0	0	50	0	
Croatia	80	0	0	40	20	
Cuba	25	25	0	0	0	
Cyprus-Rep	100	25	0	25	25	
Cyprus-Turk	100	0	0	0	100	
Czech Rep	92	8	0	0	46	
Denmark	100	0	0	7	36	
Djibouti	0	0	0	22	0	
Dominica	100	100	0	0	0	
Dominican Rep	0	0	0	0	0	
East Timor	100	0	0	20	0	
Ecuador	18	18	0	36	18	
Egypt	100	0	0	40	7	
El Salvador	13	13	0	38	13	
Eq Guinea	100	0	0	100	0	
Eritrea	100	0	0	100	0	
Estonia	100	0	0	0	0	
Ethiopia	100	0	0	0	100	
Fiji	100	10	0	30	20	
Finland	100	15	0	92	8	
France	45	0	3	41	34	
Gabon	100	0	0	50	50	
Gambia	100	0	0	25	0	
Georgia	100	0	0	0	0	
Germany	75	0	0	75	88	
Ghana	100	0	0	100	0	
Great Britain	26	0	0	67	37	
Greece	100	13	0	13	0	
Grenada	100	0	0	0	0	
Guatemala	0	0	0	25	0	
Guinea	0	0	0	0	0	
Guinea-Bissau	100	100	0	100	0	
Guyana	100	0	0	50	0	
Haiti	100	0	0	0	100	
Honduras	0	14	0	43	14	
Hong Kong	100	0	0	6	11	
Hungary	100	8	8	42	25	
Iceland	94	0	0	56	17	
India	100	0	0	50	11	

Indonesia	0	0	0	0	0
Iran	50	0	17	0	0
Iraq	85	0	0	38	0
Ireland	94	0	0	39	17
Israel	100	6	0	38	44
Italy	100	0	0	29	57
Jamaica	88	24	0	53	12
Japan	100	0	0	30	15
Jordan	86	0	0	29	0
Kazakhstan	100	0	0	100	50
Kenya	100	0	0	50	10
Kiribati	0	100	0	0	0
Korea, North	100	0	0	0	0
Korea, South	100	0	14	86	100
Kuwait	45	9	9	64	27
Kyrgyzstan	100	0	0	40	0
Laos	50	0	0	0	0
Latvia	88	0	0	63	38
Lebanon	91	0	0	73	9
Lesotho	100	0	0	75	0
Liberia	100	0	0	100	100
Libya	100	0	0	100	0
Liechtenstein	100	0	0	0	0
Lithuania	91	0	0	36	9
Luxembourg	0	0	0	61	33
Macedonia	0	0	0	0	0
Madagascar	50	0	0	50	0
Malawi	67	0	0	0	0
Malaysia	100	0	0	38	25
Maldives	100	0	0	20	0
Mali	100	0	0	0	0
Malta	0	0	20	60	20
Marshall Islands	0	0	0	0	0
Mauritania	0	0	0	50	0
Mauritius	37	26	0	8	0
Mexico	50	0	0	53	5
Micronesia	0	0	0	0	0
Moldova	0	0	0	0	0
Monaco	0	0	0	50	50
Mongolia	100	25	0	50	0
Morocco	0	0	0	50	25
Mozambique	100	0	0	0	0
Myanmar	67	0	0	0	0
Namibia	0	0	0	9	0
Nauru	0	0	0	0	0
Nepal	72	6	0	61	11
Netherlands	100	4	0	60	28
New Zealand	7	0	0	36	36

Nicaragua	0	0	0	9	0
Niger	0	0	0	0	0
Nigeria	14	0	0	29	43
Niue	0	0	0	0	0
Norway	100	0	0	13	10
Oman	75	25	0	50	25
Pakistan	9	9	0	50	14
Palau	0	0	0	0	0
Panama	7	20	0	33	13
Papua New Guinea	0	0	0	11	0
Paraguay	0	9	0	64	9
Peru	20	10	0	70	5
Philippines	0	4	0	52	8
Poland	100	0	0	38	25
Portugal	95	0	21	32	42
Qatar	73	18	0	73	36
Romania	94	0	0	24	12
Russia	53	47	0	47	35
Rwanda	0	0	0	33	0
Sao Tome	100	0	0	0	0
St. Kitts/Nevis	0	0	0	0	0
St. Lucia	0	0	0	50	25
St. Vincent	0	0	0	100	0
Samoa	0	0	0	25	0
San Marino	100	0	0	0	0
Saudi Arabia	64	0	0	57	21
Senegal	0	0	0	29	0
Serbia and Montenegro	100	0	0	46	23
Seychelles	0	0	0	0	0
Sierra Leone	0	0	0	100	0
Singapore	100	0	0	100	23
Slovakia	100	0	5	16	5
Slovenia	100	0	0	22	4
Solomon Islands	0	0	0	0	0
Somalia	100	0	0	0	0
Somaliland	0	0	0	0	0
South Africa	0	3	0	38	7
Spain	68	23	0	41	14
Sri Lanka	100	0	0	0	0
Sudan	100	0	0	0	0
Suriname	100	0	0	50	50
Swaziland	0	0	0	100	50
Sweden	100	0	0	4	31
Switzerland	88	0	4	69	46
Syria	100	0	0	60	40
Tajikistan	100	0	0	100	0

Tanzania	100	0	0	5	5
Thailand	100	29	0	14	14
Togo	0	0	0	0	100
Tonga	100	0	0	0	0
Trinidad	100	0	0	62	0
Tunisia	80	20	0	20	20
Turkey	91	22	0	78	43
Turkmenistan	100	0	0	0	0
Tuvalu	100	100	0	0	0
Uganda	100	0	0	56	0
Ukraine	89	0	0	33	22
United States	46	0	0	57	46
Uruguay	9	0	0	18	0
Uzbekistan	100	67	0	0	0
Vanuatu	100	0	0	0	0
Vatican	100	0	50	0	50
Venezuela	0	33	0	33	0
Vietnam	100	33	11	56	11
Yemen	43	0	0	0	0
Zambia	100	0	0	75	0
Zimbabwe	67	0	0	33	0

Table A-4 Best Practices of Top Government Sites, 2007

1. South Korea

South Korea earned the top spot among international e-government websites mainly on the strength of its online services. Every site surveyed contained online services, most notably the portal site, which contained in excess of eight hundred services. Not only do these sites contain a wealth of information and services, they are aesthetically pleasing and easy to navigate. In addition, the user experience is enhanced by large amount of multimedia content and interactive features offered. Most sites feature multimedia content, in the form of audio or video clips. Interactive features include almost universal use of feedback forms, user personalization, updates, and PDA access. Every site surveyed also contained some form of privacy policy.

2. Singapore

Singapore's online government, SINGOV, boasts the slogan "Integrity, Service, Excellence," and has proven true to those words. We ranked 32 sites for Singapore and it's high scores placed this nation second in the world for effective e-Government. Singapore's high rankings include 73 percent of its sites having online services, and all sites assessed had publications, databases, privacy policies and security policies. Forty-seven percent met the standards of W3C disability accessibility. The portal site is well-organized, with sections divided for "Government," "Citizens & Residents," "Businesses," and "Non-Residents." It also has useful links, an advanced site search engine, an RSS news feed, and a place where users can rate the website. They aim for "citizen-centric" services that target what people need and how to provide these easily online. The portal lives true to this service goal by providing 75 services available on their portal alone.

3. Taiwan

Taiwan's MyEGov portal website is a well-organized, fully personalized online experience. It's clean-cut appearance and colorful portal page adds to an overall effective online presence. We rated 26 different government sites set up by Taiwan. Fifty percent of these sites coded had online services. Taiwan scored 100 percent in the criteria of Publications, Databases, Privacy Policies, and Security Policies, meaning that all of the 26 sites rated had these criteria included in each site. Half of its sites met W3C disability standards. Taiwan was far above average in having many difference services accomplishable entirely online. Sixty-six of such services were available from the portal website alone. Taiwan's high ranking in the world reflects a nation that is technologically advanced and aware of the importance of e-government service today.

4. United States

The portal site of USA.gov, formerly FirstGov.gov, is an extensive database of useful information, links to state and federal agencies, and well over one hundred online services. USA.gov's personalization by user type and search capabilities allow for easy access to this wealth of information. Unlike some other countries, most U.S. governmental sites do not follow a standard template, but most are well-designed and frequently updated. While some U.S. sites featured more services than others, almost half offered some kind of fully-executable online service. The presence of privacy policies and compliance with accessibility standards were also common among U.S. sites. In addition, many of these sites offered multimedia, in both audio and video form.

5. Great Britain

Great Britain's online government system is well organized to provide citizens with the services they require. Their portal site boasts links that take you directly to some of the most popular online services and also organize a section of services based on population sects, links for "Young People," "Parents," "Disabled People," "Over 50s," "Britons living Abroad," and "Caring for someone." They also have a service menu link, "Do It Online," that takes you to the over 25 government services that can be executed entirely over the Internet. Great Britain's online government services make it easy to contact your local government, seek technological help, and search for information. Of the 26 British government sites accessed, 59 percent have online services, 96 percent have online publications and 89 percent have databases. They were also far above average in their site security development, with 89 percent of sites having privacy policies and 67 percent having security policies. The British sites stood out in terms of accessibility, with many sites available in foreign languages and 70 percent meeting the standards of W3C disability accessibility.