U.S. Municipalities E-Governance Report (2008)

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An Assessment of Municipal Websites

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Co-Sponsored by

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National Center for Public Performance
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U.S. Municipalities E-Governance Survey (2008)
A Nationwide Assessment of U.S. Municipal Websites

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EXECUTIVE SUMMARY

The U.S. Municipalities E-Governance Survey assessed the practice of digital governance in large municipalities across the United States by evaluating their websites and ranking them on a national scale. Simply stated, digital governance includes both digital government (delivery of public service) and digital democracy (citizen participation in governance). Specifically, we analyzed security, usability, and content of websites; the type of online services currently being offered; and citizen response and participation through websites established by municipal governments (Holzer & Kim, 2007).

The methodology of the U.S. survey of municipal websites mirrors our previous research on digital governance worldwide in 2003, 2005 and 2007. The worldwide survey focused on cities throughout the world based on their population size; this research focused on the largest and the second largest cities in each of the 50 states based on their population size, along with Washington DC. Our instrument for evaluating U.S. municipal websites consisted of five components: (1) Privacy/Security; (2) Usability; (3) Content; (4) Services; and (5) Citizen Participation. For each of those five components, our research applied 18-20 measures, and each measure was coded on a scale of four-points (0, 1, 2, 3) or a dichotomy of two-points (0, 3 or 0, 1). Furthermore, in developing an overall score for each municipality we have equally weighted each of the five categories so as not to skew the research in favor of a particular category (regardless of the number of questions in each category). This reflects the same methods utilized in the worldwide surveys. To ensure reliability, each municipal website was assessed by two evaluators, and in cases where a significant variation (+ or – 10%) existed on the adjusted score between evaluators, websites were analyzed a third time.

Based on the evaluation of 101 U.S. cities, Washington DC, Portland OR, New York, New Orleans, and Los Angeles represent the cities with the highest evaluation scores. Table 1 lists the top 20 municipalities in digital governance in 2008 along with their scores in individual categories. Tables 2 to 6 represent the top-ranked ten municipalities in each of the five categories.

[Table 1] Top 20 Cities in Digital Governance (2008)

Rank	City	State	Overall	Privacy	Usability	Content	Service	Participation
1	Washington	DC	67.64	10.0	18.75	14.20	13.05	11.64
2	Portland	OR	62.23	12.80	15.63	14.40	10.68	8.73
3	New York	NY	61.66	12.00	17.19	13.40	12.88	6.18
4	New Orleans	LA	61.15	14.40	15.00	13.40	12.72	5.64
5	Los Angeles	CA	58.64	13.60	13.13	11.40	10.51	10.00
6	Salt Lake City	UT	57.66	10.00	14.38	14.00	14.92	4.37
7	Minneapolis	MN	56.52	8.80	16.26	13.20	8.82	9.46
8	Boston	MA	55.81	12.00	15.32	12.40	11.19	4.91
9	Columbus	OH	55.78	13.60	13.76	13.20	10.68	4.55
10	Seattle	WA	55.28	12.80	14.07	13.20	10.85	4.37
11	Philadelphia	PA	54.91	11.20	10.32	14.60	14.07	4.73
12	Louisville	KY	54.76	10.80	13.76	12.20	12.38	5.64
13	St. Louis	MO	53.73	14.40	12.82	10.20	10.68	5.64
14	St. Paul	MN	53.65	8.80	15.01	13.60	11.53	4.73
15	Manchester	NH	53.42	14.00	15.63	11.00	9.15	3.64
16	Virginia Beach	VA	53.08	8.80	13.44	13.40	10.17	7.27
17	Denver	CO	51.87	11.60	14.38	10.40	9.50	6.00
18	Cleveland	OH	51.80	11.20	12.51	10.80	12.21	5.10
19	Indianapolis	IN	51.63	14.80	11.88	12.20	7.12	5.64
20	Sioux Falls	SD	51.34	9.20	14.38	15.00	6.95	5.82

[Table 2] Top 10 Cities in Privacy/Security (2008)

Ranking	City	State	Score
1	Indianapolis	Indiana	14.80
2	New Orleans	Louisiana	14.40
2	St. Louis	Missouri	14.40
4	Manchester	New Hampshire	14.00
4	Wichita	Kansas	14.00
4	Kansas City	Missouri	14.00
4	Huntington	West Virginia	14.00
8	Los Angeles	California	13.60
8	Columbus	Ohio	13.60
8	Fort Smith	Arkansas	13.60

[Table 3] Top 10 Cities in Usability (2008)

Ranking	City	State	Score
1	Washington	District of Columbia	18.75
2	New York	New York	17.19
3	San Diego	California	16.57
4	Minneapolis	Minnesota	16.26
5	Portland	Oregon	15.63
5	Manchester	New Hampshire	15.63
7	Boston	Massachusetts	15.32
7	Phoenix	Arizona	15.32
9	St. Paul	Minnesota	15.01
10	New Orleans	Louisiana	15.00
10	Baton Rouge	Louisiana	15.00

[Table 4] Top 10 Cities in Content (2008)

Ranking	City	State	Score
1	Sioux Falls	South Dakota	15.00
2	Philadelphia	Pennsylvania	14.60
3	Portland	Oregon	14.40
4	San Antonio	Texas	14.20
4	Washington	District of Columbia	14.20
6	Salt Lake City	Utah	14.00
7	St. Paul	Minnesota	13.60
8	New York	New York	13.40
8	New Orleans	Louisiana	13.40
8	Virginia Beach	Virginia	13.40

[Table 5] Top 10 Cities in Service Delivery (2008)

Ranking	City	State	Score
1	Salt Lake City	Utah	14.92
2	Philadelphia	Pennsylvania	14.07
3	Washington	District of Columbia	13.05
4	New York	New York	12.88
5	New Orleans	Louisiana	12.72
6	Louisville	Kentucky	12.38
7	Cleveland	Ohio	12.21
8	Buffalo	New York	11.53
8	St. Paul	Minnesota	11.53
8	Nashville	Tennessee	11.53
8	Houston	Texas	11.53
8	Tucson	Arizona	11.53

[Table 6] Top 10 Cities in Citizen Participation (2008)

Ranking	City	State	Score
1	Washington	District of Columbia	11.64
2	Los Angeles	California	10.00
3	Minneapolis	Minnesota	9.46
4	Portland	Oregon	8.73
5	Des Moines	Iowa	8.19
6	Nashville	Tennessee	7.46
7	Virginia Beach	Virginia	7.27
8	San Diego	California	6.55
9	New York	New York	6.18
10	Denver	Colorado	6.00

Our survey results indicate that all the 101 cities selected for the survey have developed official websites, and the average score for digital governance in these municipalities is 42.04. This research represents a longitudinal effort to evaluate digital governance in large municipalities in the United States. The continued study of municipalities nationwide, with the next U.S. Survey planned in 2010, will further provide insight into the direction and the performance of e-governance in the United States.

1

INTRODUCTION

This research replicates the global surveys completed in 2003, 2005 and 2007, and evaluates the practice of digital governance in large municipalities across the United States in 2008. The following chapters represent the overall findings of the research. Chapter 2 outlines the methodology utilized in determining the websites evaluated, as well as the instrument used in the evaluations. Our survey instrument uses 98 measures and applies a rigorous approach for conducting the evaluations. Chapter 3 presents the overall findings for the 2008 evaluation. The overall results are also broken down into results by region, and by the largest and second-largest municipalities.

Chapters 4 through 8 take a closer look at the results for each of the five e-governance categories. Chapter 4 focuses on the results of Privacy and Security with regard to municipal websites. Chapter 5 looks at the Usability of municipal websites throughout the United States. Chapter 6 presents the findings for Content, while Chapter 7 looks at Services. Chapter 8 concludes the focus on specific e-governance categories by presenting the findings of Citizen Participation online, with Chapter 9 providing recommendations and a discussion of significant findings.

2

METHODOLOGY

The methodology of the U.S. survey of municipal websites mirrors our previous research on digital governance worldwide in 2003, 2005 and 2007. The worldwide survey focused on cities throughout the world based on their population size; this research focused on the largest and the second largest cities in each of the 50 U.S. states based on their population size, along with Washington, D.C. Our instrument for evaluating city and municipal websites consisted of five components: (1) Privacy/Security; (2) Usability; (3) Content; (4) Services; and (5) Citizen Participation. For each of those five components, our research applied 18-20 measures, and each measure was coded on a scale of four-points (0, 1, 2, 3) or a dichotomy of two-points (0, 3 or 0, 1). Furthermore, in developing an overall score for each municipality we have equally weighted each of the five categories so as not to skew the research in favor of a particular category (regardless of the number of questions in each category). This reflects the same methods utilized in the Worldwide Surveys. To ensure reliability, each municipal website was assessed by two evaluators, and in cases where significant variation (+ or – 10%) existed on the adjusted score between evaluators, websites were analyzed a third time.

The rationale for selecting the largest municipalities stems from the e-governance literature, which suggests a positive relationship between population and e-governance capacity at the local level (Moon, 2002; Moon and deLeon, 2001; Musso, et al., 2000; Weare, et al. 1999). Table 2-1 is a list of the 101 cities selected.

[Table 2-1] List of 101 Municipalities (2008)

S. No	State	Largest City #1	Largest City #2
1	Alabama	Birmingham	Montgomery
2	Alaska	Anchorage	Fairbanks
3	Arizona	Phoenix	Tucson
4	Arkansas	Little Rock	Fort Smith
5	California	Los Angeles	San Diego
6	Colorado	Denver	Colorado Springs
7	Connecticut	Bridgeport	New Haven
8	Delaware	Wilmington	Dover
9	Florida	Jacksonville	Miami
10	Georgia	Atlanta	Augusta
11	Hawaii	Honolulu	Hilo
12	Idaho	Boise City	Nampa
13	Illinois	Chicago	Aurora
14	Indiana	Indianapolis	Fort Wayne
15	Iowa	Des Moines	Cedar Rapids
16	Kansas	Wichita	Overland Park
17	Kentucky	Louisville	Lexington
18	Louisiana	New Orleans	Baton Rouge
19	Maine	Portland	Lewiston
20	Maryland	Baltimore	Frederick
21	Massachusetts	Boston	Worcester
22	Michigan	Detroit	Grand Rapids
23	Minnesota	Minneapolis	St. Paul
24	Mississippi	Jackson	Gulfport
25	Missouri	Kansas City	St. Louis
26	Montana	Billings	Missoula
27	Nebraska	Omaha	Lincoln
28	Nevada	Las Vegas	Henderson
29	New Hampshire	Manchester	Nashua
30	New Jersey	Newark	Jersey City

31	New Mexico	Albuquerque	Las Cruces
32	New York	New York	Buffalo
33	North Carolina	Charlotte	Raleigh
34	North Dakota	Fargo	Bismarck
35	Ohio	Columbus	Cleveland
36	Oklahoma	Oklahoma City	Tulsa
37	Oregon	Portland	Salem
38	Pennsylvania	Philadelphia	Pittsburgh
39	Rhode Island	Providence	Warwick
40	South Carolina	Columbia	Charleston
41	South Dakota	Sioux Falls	Rapid City
42	Tennessee	Memphis	Nashville
43	Texas	Houston	San Antonio
44	Utah	Salt Lake City	West Valley City
45	Vermont	Burlington	Rutland
46	Virginia	Virginia Beach	Norfolk
47	Washington	Seattle	Spokane
48	West Virginia	Charleston	Huntington
49	Wisconsin	Milwaukee	Madison
50	Wyoming	Cheyenne	Casper
51	District of Columbia	Washington	

WEBSITE SURVEY

In this research, the main city homepage is defined as the official website where information about city administration and online services are provided by the city. Municipalities across the United States are increasingly developing websites to provide their services online; however, e-government is more than simply constructing a website. The emphasis should be focused on using such technologies to effectively provide government services. According to Pardo (2000), some of the initiatives in this direction

are: (1) providing 24/7 access to government information and public meetings; (2) providing mechanisms to enable citizens to comply with state and federal rules regarding drivers licenses, business licenses, etc.; (3) providing access to special benefits like welfare funds, pensions; (4) providing a network across various government agencies to enable collaborative approaches to serving citizens; and (5) providing various channels for digital democracy and citizen participation initiatives. Thus, it is essential that the fundamentals of government service delivery are not altered simply by introducing a website as the new window on government (Pardo, 2000). E-government initiatives clearly extend beyond the textual listing of information to a more "intentions-based" design so that citizens can more effectively utilize web portals (Howard 2001).

The city website typically includes information about the city council, mayor and executive branch. If there are separate homepages for agencies, department or the city council, evaluators examined if these sites were linked to the menu on the main city homepage. If the website was not linked, it was excluded from evaluation.

E-GOVERNANCE SURVEY INSTRUMENT

The Rutgers E-Governance Survey Instrument is the most comprehensive index for e-governance research today. With 98 measures and five distinct categorical areas of e-governance research, the survey instrument is more comprehensive than any other. Our instrument for evaluating city and municipal websites consists of five components: (1) Privacy/Security; (2) Usability; (3) Content; (4) Services; and (5) Citizen Participation. Table 2-2, E-Governance Performance Measures, summarizes the 2008 survey instrument, and Appendix A presents an overview of the criteria.

[Table 2-2] E-governance Performance Measures

E-governance Category	Key Concepts	Raw Score	Weighted Score	Keywords
Privacy/ Security	18	25	20	Privacy policies, authentication, encryption, data management, cookies
Usability	20	32	20	User-friendly design, branding, length of homepage, targeted audience links or channels, and site search capabilities
Content	20	48	20	Access to current accurate information, public documents, reports, publications, and multimedia materials
Services	20	59	20	Transactional services - purchase or register, interaction between citizens, businesses and government
Citizen Participation	20	55	20	Online civic engagement/ policy deliberation, citizen based performance measurement
Total	98	219	100	

Our survey instrument utilizes 98 measures, of which 43 are dichotomous. For each of the five e-governance components, our research applies 18 to 20 measures, and for questions which were not dichotomous, each measure was coded on a four-point scale (0, 1, 2, 3; see Table 2-3 below). Furthermore, in developing an overall score for each municipality, we have equally weighted each of the five categories so as not to skew the research in favor of a particular category (regardless of the number of questions in each category). The dichotomous measures in the Services and Citizen Participation categories correspond with values on our four point scale of 0 or 3; dichotomous measures in Privacy or Usability correspond to ratings of 0 or 1 on the scale.

[Table 2-3] E-governance Scale

Scale	Description
0	Information about a given topic does not exist on the website
1	Information about a given topic exists on the website (including links to other information and e-mail addresses)
2	Downloadable items are available on the website (forms, audio, video, and other one-way transactions, popup boxes)
3	Services, transactions, or interactions can take place completely online (credit card transactions, applications for permits, searchable databases, use of cookies, digital signatures, restricted access)

Our instrument placed a higher value on some dichotomous measures, due to the relative value of the different e-government services being evaluated. For example, evaluators using our instrument in the "service" category were given the option of scoring websites as either 0 or 3 when assessing whether a site allowed users to access private information online (e.g. educational records, medical records, point total of driving violations, lost property). "No access" equated to a rating of 0. Allowing residents or employees to access private information online was a higher order task that required more technical competence, and was clearly an online service, or 3, as defined in Table 2-3.

On the other hand, when assessing a site as to whether or not it had a privacy statement or policy, evaluators were given the choice of scoring the site as 0 or 1. The presence or absence of a security policy was clearly a content issue that emphasized placing information online, and corresponded with a value of 1 on the scale outlined in Table 2-3. The differential values assigned to dichotomous categories were useful in comparing the different components of municipal websites with one another.

To ensure reliability, each municipal website was assessed by two evaluators, and in cases where significant variation (+ or – 10%) existed on the weighted score between evaluators, websites were analyzed a third time. Furthermore, an example for each measure indicated how to score the variable. Evaluators were also given comprehensive written instructions for assessing websites.

E-GOVERNANCE CATEGORIES

This section details the five e-governance categories and discusses specific measures that were used to evaluate websites. The discussion of Privacy/Security examines privacy policies and issues related to authentication. Discussion of the Usability category involves traditional web pages, forms and search tools. The Content category is addressed in terms of access to contact information, public documents and disability access, as well as access to multimedia and time sensitive information. The section on Services examines interactions that allow users to purchase or pay for services, and the ability of users to apply or register for municipal events or services online. Finally, the measures for Citizen Participation involve examining how local governments are engaging citizens and providing mechanisms for citizens to participate in government online.

PRIVACY/SECURITY

The first part of our analysis examined the security and privacy of municipal websites in two key areas, privacy policies and authentication of users. In examining municipal privacy policies, we determined whether such a policy was available on every page that accepted data, and whether or not the word “privacy” was used in the link to such a statement. In addition, we looked for privacy policies on every page that required or accepted data. We were also interested in determining if privacy policies identified the agencies collecting the information, and whether the policy identified exactly what data was being collected on the site.

Our analysis checked to see if the intended use of the data

was explicitly stated on the website. The analysis examined whether the privacy policy addressed the use or sale of data collected on the website by outside or third party organizations. Our research also determined if there was an option to decline the disclosure of personal information to third parties. This included other municipal agencies, other state and local government offices, or businesses in the private sector. Furthermore, we examined privacy policies to determine if third party agencies or organizations were governed by the same privacy policies as was the municipal website. We also determined whether users had the ability to review personal data records and contest inaccurate or incomplete information.

In examining factors affecting the security and privacy of local government websites, we addressed managerial measures that limit access of data and assure that it is not used for unauthorized purposes. The use of encryption in the transmission of data, as well as the storage of personal information on secure servers, was also examined. We also determined if websites used digital signatures to authenticate users. In assessing how or whether municipalities used their websites to authenticate users, we examined whether public or private information was accessible through a restricted area that required a password and/or registration.

A growing e-governance trend at the local level is for municipalities to offer their website users access to public, and in some cases private, information online. Other research has discussed the governance issues associated with sites that choose to charge citizens for access to public information (West, 2001). We add our own concerns about the impact of the digital divide if public records are available only through the Internet or if municipalities insist on charging a fee for access to public records. Our analysis specifically addresses online access to public databases by determining if public information such as property tax assessments, or private information such as court documents, is available to users of municipal websites. In addition, there are concerns that public agencies will use their websites to monitor citizens or create profiles based on the information they access online. For example, many websites use

"cookies" or "web beacons"[1] to customize their websites for users, but that technology can also be used to monitor Internet habits and profile visitors to websites. Our analysis examined municipal privacy policies to determine if they addressed the use of cookies or web beacons.

USABILITY

This research also examined the usability of municipal websites. Simply stated, we wanted to know if sites were "user-friendly." To address usability concerns we adapted several best practices and measures from other public and private sector research (Giga, 2000). Our analysis of usability examined three types of websites: traditional web pages, forms, and search tools.

To evaluate traditional web pages written using hypertext markup language (html), we examined issues such as branding and structure (e.g., consistent color, font, graphics, page length, etc.). For example, we looked to see if all pages used consistent color, formatting, "default colors" (e.g., blue links and purple visited links) and underlined text to indicate links. Other items examined included whether system hardware and software requirements were clearly stated on the website.

In addition, our research examined each municipality's homepage to determine if it was too long (two or more screen lengths) or if alternative versions of long documents, such as .pdf or .doc files, were available. The use of targeted audience links or

[1] The New York City privacy policy (www.nyc.gov/privacy) gives the following definitions of cookies and web bugs or beacons: "Persistent cookies are cookie files that remain upon a user's hard drive until affirmatively removed, or until expired as provided for by a pre-set expiration date. Temporary or "Session Cookies" are cookie files that last or are valid only during an active communications connection, measured from beginning to end, between computer or applications (or some combination thereof) over a network. A web bug (or beacon) is a clear, camouflaged or otherwise invisible graphics image format ("GIF") file placed upon a web page or in hyper text markup language ("HTML") e-mail and used to monitor who is reading a web page or the relevant email. Web bugs can also be used for other monitoring purposes such a profiling of the affected party."

"channels" to customize the website for specific groups such as citizens, businesses, or other public agencies was also examined. We looked for the consistent use of navigation bars and links to the homepage on every page. The availability of a "sitemap" or hyperlinked outline of the entire website was examined. Our assessment also examined whether duplicated link names connect to the same content.

Our research examined online forms to determine their usability in submitting data or conducting searches of municipal websites. We looked at issues such as whether field labels aligned appropriately with field, whether fields were accessible by keystrokes (e.g. tabs), or whether the cursor was automatically placed in the first field. We also examined whether required fields were noted explicitly, and whether the tab order of fields was logical. For example, after a user filled out their first name and pressed the tab key, did the cursor automatically go to the surname field? Or, did the page skip to another field such as zip code, only to return to the surname later?

We also checked to see if form pages provided additional information about how to fix errors if they were submitted. For example, did users have to reenter information if errors were submitted, or did the site flag incomplete or erroneous forms before accepting them? Also, did the site give a confirmation page after a form was submitted, or did it return users to the homepage?

Our analysis also addressed the use of search tools on municipal websites. We examined sites to determine if help was available for searching a municipality's website, or if the scope of searches could be limited to specific areas of the site. Were users able to search only in "public works" or "the mayor's office," or did the search tool always search the entire site? We also looked for advanced search features such as exact phrase searching, the ability to match all/ any words, and Boolean searching capabilities (e.g., the ability to use AND/OR/NOT operators). Our analysis also addressed a site's ability to sort search results by relevance or other criteria.

CONTENT

Content is a critical component of any website. No matter how technologically advanced a website's features, if its content is not current, if it is difficult to navigate, or if the information provided is not correct, then it is not fulfilling its purpose. When examining website content, our research examined five key areas: access to contact information, public documents, disability access, multimedia materials, and time sensitive information. When addressing contact information, we looked for information about each agency represented on the website.

In addition, we also looked for the availability of office hours or a schedule of when agency offices are open. In assessing the availability of public documents, we looked for the availability of the municipal code or charter online. We also looked for content items, such as agency mission statements and minutes of public meetings. Other content items included access to budget information and publications. Our assessment also examined whether websites provided access to disabled users through either "bobby compliance" (disability access for the blind, http://www.cast.org/bobby) or disability access for deaf users via a TDD phone service. We also checked to see if sites offered content in more than one language.

Time sensitive information that was examined included the use of a municipal website for emergency management, and the use of a website as an alert mechanism (e.g. terrorism alert or severe weather alert). We also checked for time sensitive information such as the posting of job vacancies or a calendar of community events. In addressing the use of multimedia, we examined each site to determine if audio or video files of public events, speeches, or meetings were available.

SERVICES

A critical component of e-governance is the provision of municipal services online. Our analysis examined two different types of services: (1) those that allow citizens to interact with the municipality, and (2) services that allow users to register for

municipal events or services online. In many cases, municipalities have developed the capacity to accept payment for municipal services and taxes. The first type of service examined, which implies interactivity, can be as basic as forms that allow users to request information or file complaints. Local governments across the world use advanced interactive services to allow users to report crimes or violations, customize municipal homepages based on their needs (e.g., portal customization), and access private information online, such as court records, education records, or medical records. Our analysis examined municipal websites to determine if such interactive services were available.

The second type of service examined in this research determined if municipalities have the capacity to allow citizens to register for municipal services online. For example, many jurisdictions now allow citizens to apply for permits and licenses online. Online permitting can be used for services that vary from building permits to dog licenses. In addition, some local governments are using the Internet for procurement, allowing potential contractors to access requests for proposals or even bid for municipal contracts online. In other cases, local governments are chronicling the procurement process by listing the total number of bidders for a contract online, and in some cases listing contact information for bidders.

This analysis also examined municipal websites to determine if they developed the capacity to allow users to purchase or pay for municipal services and fees online. Examples of transactional services from across the United States include the payment of public utility bills and parking tickets online. In many jurisdictions, cities and municipalities allow online users to file or pay local taxes, or pay fines such as traffic tickets. In some cases, cities around the world are allowing their users to register or purchase tickets to events in city halls or arenas online.

CITIZEN PARTICIPATION

Finally, online citizen participation in government continues to be the most recent area of e-governance study, and very few

public agencies offer online opportunities for civic engagement. Our analysis looked at several ways public agencies at the local level were involving citizens. For example, do municipal websites allow users to provide online comments or feedback to individual agencies or elected officials?

Our analysis examined whether local governments offer current information about municipal governance online or through an online newsletter or e-mail listserv. Our analysis also examined the use of internet-based polls about specific local issues. In addition, we examined whether communities allow users to participate and view the results of citizen satisfaction surveys online. For example, some municipalities used their websites to measure performance and published the results of performance measurement activities online.

Still other municipalities used online bulletin boards or other chat capabilities for gathering input on public issues. Online bulletin boards offer citizens the opportunity to post ideas, comments, or opinions without specific discussion topics. In some cases, agencies attempt to structure online discussions around policy issues or specific agencies. Our research looked for municipal use of the Internet to foster civic engagement and citizen participation in government.

3

OVERALL RESULTS

The following chapter presents the results for all the evaluated municipal websites during 2008. Table 3-1 provides the rankings for 101 municipal websites and their overall scores. The overall scores reflect the combined scores of each municipality's score in the five e-governance component categories. The highest possible score for any one city website is 100. Washington DC received a score of 67.64, the highest ranked city website for 2008. Portland, OR had the second highest ranked municipal website with a score of 62.23, while New York ranked third with a score of 61.66. New Orleans and Los Angeles complete the top five ranked municipal websites with scores of 61.15 and 58.64, respectively.

The results of the overall rankings are separated by region in Tables 3-4 through 3-7. Minneapolis (Midwest), New York (Northeast), Washington DC (South), and Portland (West) emerged as the top ranked city for each region in the United States. Also included in the rankings by region are the scores for each of the five e-governance component categories.

[Table 3-1] Overall E-governance Rankings (2008)

Ranking	City	State	Score
1	Washington	District of Columbia	67.64
2	Portland	Oregon	62.23
3	New York	New York	61.66
4	New Orleans	Louisiana	61.15
5	Los Angeles	California	58.64
6	Salt Lake City	Utah	57.66
7	Minneapolis	Minnesota	56.52
8	Boston	Massachusetts	55.81
9	Columbus	Ohio	55.78
10	Seattle	Washington	55.28
11	Philadelphia	Pennsylvania	54.91
12	Louisville	Kentucky	54.76
13	St. Louis	Missouri	53.73
14	St. Paul	Minnesota	53.65
15	Manchester	New Hampshire	53.42
16	Virginia Beach	Virginia	53.08
17	Denver	Colorado	51.87
18	Cleveland	Ohio	51.8
19	Indianapolis	Indiana	51.63
20	Sioux Falls	South Dakota	51.34
21	Des Moines	Iowa	51.17
22	Wichita	Kansas	50.66
23	San Diego	California	50.51
24	Raleigh	North Carolina	50.18
25	Lincoln	Nebraska	50.15
26	Nashville	Tennessee	49.23
27	Chicago	Illinois	49.15
28	Baton Rouge	Louisiana	48.73
29	Houston	Texas	48.1
30	Kansas City	Missouri	47.99

[Table 3-1] (*cont.*) Overall E-governance Rankings (2008)

31	Las Cruces	New Mexico	47.82
32	San Antonio	Texas	47.41
33	Colorado Springs	Colorado	46.85
34	Phoenix	Arizona	46.71
35	Buffalo	New York	46.58
36	Huntington	West Virginia	46.54
37	Cedar Rapids	Iowa	46.35
38	Grand Rapids	Michigan	46.04
39	Albuquerque	New Mexico	45.93
40	Tulsa	Oklahoma	45.56
41	Milwaukee	Wisconsin	45.39
42	Oklahoma City	Oklahoma	44.84
43	Atlanta	Georgia	44.59
44	Memphis	Tennessee	44.45
45	Providence	Rhode Island	44.09
46	Pittsburgh	Pennsylvania	43.77
47	Charlotte	North Carolina	43.65
48	Norfolk	Virginia	43.29
49	Tucson	Arizona	43.25
50	Henderson	Nevada	42.97
51	Fargo	North Dakota	42.76
52	Detroit	Michigan	42.44
53	Honolulu	Hawaii	41.96
54	Augusta	Georgia	41.83
55	Baltimore	Maryland	41.76
56	Madison	Wisconsin	41.74
57	Salem	Oregon	41.43
58	Montgomery	Alabama	41.2
59	Anchorage	Alaska	41.01
60	Overland Park	Kansas	40.57

[Table 3-1] (*cont.*) Overall E-governance Rankings (2008)

61	Spokane	Washington	40.43
62	Aurora	Illinois	40.31
63	Frederick	Maryland	39.55
64	Jackson	Mississippi	39.2
65	Omaha	Nebraska	38.99
66	Las Vegas	Nevada	37.78
67	West Valley City	Utah	37.59
68	Wilmington	Delaware	37.49
69	Fort Smith	Arkansas	37.34
70	Casper	Wyoming	37.32
71	Warwick	Rhode Island	35.96
72	Miami	Florida	35.89
73	Jersey City	New Jersey	35.58
74	Billings	Montana	35.36
75	Dover	Delaware	35.25
76	Fort Wayne	Indiana	34.52
77	Newark	New Jersey	34.25
78	New Haven	Connecticut	34.24
79	Bridgeport	Connecticut	33.54
80	Boise City	Idaho	32.77
81	Cheyenne	Wyoming	32.69
82	Nashua	New Hampshire	32.56
83	Lewiston	Maine	32.52
84	Bismarck	North Dakota	32.46
85	Jacksonville	Florida	32.04
86	Charleston	South Carolina	31.98
87	Lexington	Kentucky	31.49
88	Little Rock	Arkansas	31.33
89	Birmingham	Alabama	31.02
90	Worcester	Massachusetts	30.79

[Table 3-1] (*cont.*) Overall E-governance Rankings (2008)

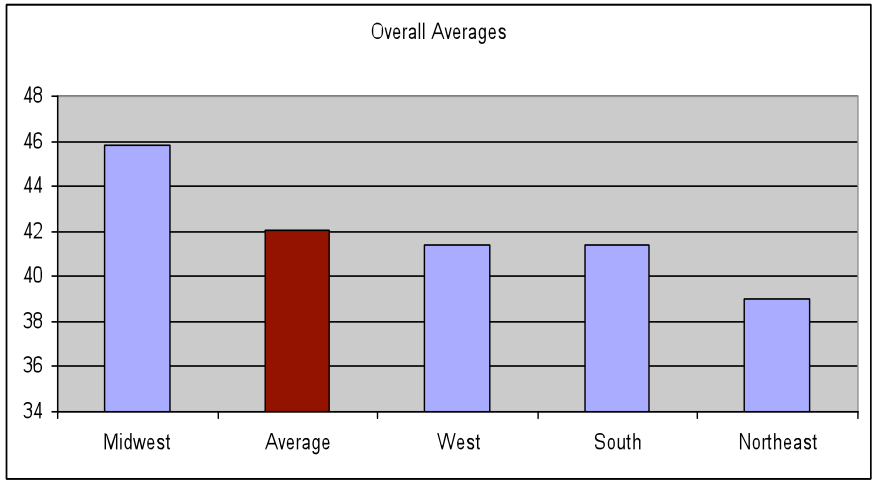
91	Missoula	Montana	29.47
92	Portland	Maine	28.62
93	Columbia	South Carolina	27.56
94	Burlington	Vermont	26.01
95	Rapid City	South Dakota	25.2
96	Fairbanks	Alaska	24.74
97	Nampa	Idaho	21.34
98	Charleston	West Virginia	19.66
99	Gulfport	Mississippi	18.36
100	Rutland	Vermont	18.3
101	Hilo	Hawaii	13.23

The Midwest was the highest ranked region with an average score of 45.84. The West, with a score of 41.41, ranked second, followed closely by the South and Northeast with scores of 41.40 and 39.03 respectively. The overall average score for all municipalities is 42.04. The results of the overall rankings are separated by region in Tables 3-2 through 3-5. The results of the evaluation will be discussed in further detail in the following chapters.

[Table 3-6] Average Score by Region 2008

	Midwest	**Average**	**West**	**South**	**Northeast**
Overall Averages	45.84	**42.04**	41.41	41.40	39.03

[Fig 3-1] Average Score by Region (2008)



[Table 3-2] Overall Results of Cities in Midwest (2008)

No	City	Score	Privacy	Usability	Content	Service	Participation
1	Minneapolis	56.52	8.80	16.26	13.20	8.82	9.46
2	Columbus	55.78	13.60	13.76	13.20	10.68	4.55
3	St. Louis	53.73	14.40	12.82	10.20	10.68	5.64
4	St. Paul	53.65	8.80	15.01	13.60	11.53	4.73
5	Cleveland	51.80	11.20	12.51	10.80	12.21	5.10
6	Indianapolis	51.63	14.80	11.88	12.20	7.12	5.64
7	Sioux Falls	51.34	9.20	14.38	15.00	6.95	5.82
8	Des Moines	51.17	11.20	12.82	8.80	10.17	8.19
9	Wichita	50.66	14.00	12.50	10.80	11.36	2.00
10	Lincoln	50.15	13.20	14.07	9.80	10.17	2.91
11	Chicago	49.15	12.40	14.69	10.80	10.17	1.09
12	Kansas City	47.99	14.00	11.57	7.40	10.85	4.18
13	Cedar Rapids	46.35	10.00	12.50	11.40	8.82	3.64
14	Grand Rapids	46.04	10.80	13.13	10.40	8.99	2.73

[Table 3-2] (*cont.*) Overall Results of Cities in Midwest (2008)

15	Milwaukee	45.39	7.20	11.88	12.20	11.02	3.09
16	Fargo	42.76	8.80	12.82	9.20	8.31	3.64
17	Detroit	42.44	9.60	11.57	10.80	8.48	2.00
18	Madison	41.74	6.40	12.51	9.60	10.51	2.73
19	Overland Park	40.57	4.80	14.07	10.60	7.29	3.82
20	Aurora	40.31	9.20	12.82	11.00	4.75	2.55
21	Omaha	38.99	8.80	9.69	8.20	8.31	4.00
22	Fort Wayne	34.52	8.40	10.01	8.60	6.61	0.91
23	Bismarck	32.46	4.80	12.19	9.60	4.24	1.64
24	Rapid City	25.20	0.00	7.82	7.60	5.43	4.37

[Table 3-3] Overall Results of Cities in Northeast (2008)

Rank	City	Score	Privacy	Usability	Content	Service	Participation
1	New York	61.66	12.00	17.19	13.40	12.88	6.18
2	Boston	55.81	12.00	15.32	12.40	11.19	4.91
3	Philadelphia	54.91	11.20	10.32	14.60	14.07	4.73
4	Manchester	53.42	14.00	15.63	11.00	9.15	3.64
5	Buffalo	46.58	9.60	13.13	9.60	11.53	2.73
6	Providence	44.09	8.40	12.51	9.60	10.68	2.91
7	Pittsburgh	43.77	10.80	11.88	10.80	8.48	1.82
8	Warwick	35.96	10.00	10.32	8.20	5.09	2.37
9	Jersey City	35.58	7.20	12.51	6.60	7.46	1.82
10	Newark	34.25	8.80	13.75	5.00	5.42	1.28
11	New Haven	34.24	1.20	11.26	11.00	9.16	1.64
12	Bridgeport	33.54	2.40	11.88	8.40	8.14	2.73
13	Nashua	32.56	0.00	12.19	11.20	6.44	2.73
14	Lewiston	32.52	4.80	9.69	11.00	5.76	1.27
15	Worcester	30.79	2.40	7.82	8.40	10.17	2.00
16	Portland	28.62	2.00	10.63	9.00	6.27	0.73
17	Burlington	26.01	0.00	9.69	9.20	4.58	2.55
18	Rutland	18.30	0.00	10.63	5.60	1.53	0.55

[Table 3-4] Overall Results of Cities in South (2008)

Rank	City	Score	Privacy	Usability	Content	Service	Participation
1	Washington	67.64	10.0	18.75	14.20	13.05	11.64
2	New Orleans	61.15	14.40	15.00	13.40	12.72	5.64
3	Louisville	54.76	10.80	13.76	12.20	12.38	5.64
4	Virginia Beach	53.08	8.80	13.44	13.40	10.17	7.27
5	Raleigh	50.18	10.40	14.07	11.80	11.19	2.73
6	Nashville	49.23	8.80	11.25	10.20	11.53	7.46
7	Baton Rouge	48.73	8.80	15.00	13.20	8.82	2.91
8	Houston	48.10	9.60	12.19	10.60	11.53	4.18
9	San Antonio	47.41	5.20	14.69	14.20	9.32	4.00
10	Huntington	46.54	14.00	14.69	8.80	5.60	3.46
11	Tulsa	45.56	9.20	13.44	9.20	8.82	4.91
12	Oklahoma City	44.84	10.40	9.38	11.20	9.32	4.55
13	Atlanta	44.59	8.80	13.13	9.00	9.66	4.00
14	Memphis	44.45	9.60	12.82	9.60	8.98	3.46
15	Charlotte	43.65	8.80	10.63	10.00	9.49	4.73
16	Norfolk	43.29	10.80	8.76	11.00	7.29	5.46
17	Augusta	41.83	7.60	14.69	10.80	7.29	1.46
18	Baltimore	41.76	8.00	12.19	10.60	6.61	4.36
19	Montgomery	41.20	10.80	10.63	8.40	8.64	2.73
20	Frederick	39.55	2.40	11.88	10.80	11.02	3.46
21	Jackson	39.20	12.40	12.82	8.80	3.73	1.46
22	Wilmington	37.49	4.80	11.88	8.80	9.83	2.18
23	Fort Smith	37.34	13.60	9.07	7.40	4.92	2.37
24	Miami	35.89	10.00	9.38	10.60	3.73	2.19
25	Dover	35.25	6.80	12.19	8.00	6.44	1.82
26	Jacksonville	32.04	5.60	9.38	8.80	6.44	1.82
27	Charleston	31.98	6.40	10.00	7.80	5.59	2.19
28	Lexington	31.49	2.40	10.94	9.80	5.26	3.09
29	Little Rock	31.33	2.40	11.88	9.20	4.58	3.28
30	Birmingham	31.02	6.00	10.63	8.20	4.92	1.28

[Table 3-4] (*cont.*) Overall Results of Cities in South (2008)

31	Columbia	27.56	0.00	10.94	9.00	5.26	2.36
32	Charleston	19.66	0.00	5.01	7.60	5.43	1.64
32	Gulfport	18.36	0.00	6.88	8.60	2.89	0.00

[Table 3-5] Overall Results of Cities in West (2008)

Rank	City	Score	Privacy	Usability	Content	Service	Participation
1	Portland	62.23	12.80	15.63	14.40	10.68	8.73
2	Los Angeles	58.64	13.60	13.13	11.40	10.51	10.00
3	Salt Lake City	57.66	10.00	14.38	14.00	14.92	4.37
4	Seattle	55.28	12.80	14.07	13.20	10.85	4.37
5	Denver	51.87	11.60	14.38	10.40	9.50	6.00
6	San Diego	50.51	9.60	16.57	10.00	7.80	6.55
7	Las Cruces	47.82	10.80	12.82	12.60	7.97	3.64
8	Colorado Springs	46.85	11.20	11.25	11.60	8.98	3.82
9	Phoenix	46.71	6.80	15.32	11.40	8.48	4.73
10	Albuquerque	45.93	7.60	14.69	12.00	7.46	4.18
11	Tucson	43.25	7.60	11.57	10.20	11.53	2.37
12	Henderson	42.97	11.20	12.51	7.80	7.29	4.18
13	Honolulu	41.96	5.60	11.25	12.20	10.00	2.91
14	Salem	41.43	4.00	11.57	13.00	8.14	4.73
15	Anchorage	41.01	6.40	11.57	10.00	10.68	2.37
16	Spokane	40.43	12.00	10.01	10.80	5.09	2.55
17	Las Vegas	37.78	4.00	10.01	9.20	9.49	5.09
18	West Valley City	37.59	0.00	14.07	9.80	8.82	4.91
19	Casper	37.32	7.60	13.13	7.80	6.61	2.19
20	Billings	35.36	6.40	11.88	9.80	4.92	2.37
21	Boise City	32.77	6.40	9.07	9.00	5.77	2.55
22	Cheyenne	32.69	8.80	10.01	7.20	5.60	1.09
23	Missoula	29.47	3.20	8.44	8.20	7.63	2.00
24	Fairbanks	24.74	5.60	8.13	6.20	3.90	0.91
25	Nampa	21.34	0.00	7.82	9.20	3.05	1.28
26	Hilo	13.23	0.00	8.13	1.60	1.87	1.64

4

PRIVACY AND SECURITY

The following chapter highlights the results for Privacy and Security. Results indicate that Indianapolis, New Orleans, St. Louis, Manchester, Wichita, Kansas City and Huntington are top ranked cities in the category of Privacy and Security. Indianapolis is ranked first with a score of 14.80, while New Orleans and St. Louis follow together in the second position with a score of 14.40 points. The remaining cities share the fourth position with a score of 14.0 points. Table 4-1 summarizes the results for all the municipalities evaluated in this category.

The average score in this category is 7.97, with cities in the Midwest ranked the highest with an average score of 9.77. Cities in the South scored 7.81 on average in this category, followed by the cities in the West and Northeast with scores of 7.52 and 6.49 respectively.

[Table 4-1] Results in Privacy/Security (2008)

Ranking	City	State	Privacy
1	Indianapolis	Indiana	14.80
2	New Orleans	Louisiana	14.40
2	St. Louis	Missouri	14.40
4	Manchester	New Hampshire	14.00
4	Wichita	Kansas	14.00
4	Kansas City	Missouri	14.00
4	Huntington	West Virginia	14.00
8	Los Angeles	California	13.60
8	Columbus	Ohio	13.60
8	Fort Smith	Arkansas	13.60
11	Lincoln	Nebraska	13.20
12	Portland	Oregon	12.80
12	Seattle	Washington	12.80
14	Chicago	Illinois	12.40
14	Jackson	Mississippi	12.40
16	New York	New York	12.00
16	Boston	Massachusetts	12.00
16	Spokane	Washington	12.00
19	Denver	Colorado	11.60
20	Philadelphia	Pennsylvania	11.20
20	Cleveland	Ohio	11.20
20	Des Moines	Iowa	11.20
20	Colorado Springs	Colorado	11.20
20	Henderson	Nevada	11.20
25	Louisville	Kentucky	10.80
25	Las Cruces	New Mexico	10.80
25	Grand Rapids	Michigan	10.80
25	Pittsburgh	Pennsylvania	10.80
25	Norfolk	Virginia	10.80
25	Montgomery	Alabama	10.80
31	Raleigh	North Carolina	10.40

[Table 4-1] (*cont.*)Results in Privacy/Security (2008)

Ranking	City	State	Score
31	Oklahoma City	Oklahoma	10.40
33	Salt Lake City	Utah	10.00
33	Cedar Rapids	Iowa	10.00
33	Warwick	Rhode Island	10.00
33	Miami	Florida	10.00
33	Washington	District of Columbia	10.00
38	San Diego	California	9.60
38	Houston	Texas	9.60
38	Buffalo	New York	9.60
38	Memphis	Tennessee	9.60
38	Detroit	Michigan	9.60
43	Sioux Falls	South Dakota	9.20
43	Tulsa	Oklahoma	9.20
43	Aurora	Illinois	9.20
46	Minneapolis	Minnesota	8.80
46	St. Paul	Minnesota	8.80
46	Virginia Beach	Virginia	8.80
46	Nashville	Tennessee	8.80
46	Baton Rouge	Louisiana	8.80
46	Atlanta	Georgia	8.80
46	Charlotte	North Carolina	8.80
46	Fargo	North Dakota	8.80
46	Omaha	Nebraska	8.80
46	Newark	New Jersey	8.80
46	Cheyenne	Wyoming	8.80
57	Providence	Rhode Island	8.40
57	Fort Wayne	Indiana	8.40
59	Baltimore	Maryland	8.00
60	Albuquerque	New Mexico	7.60
60	Tucson	Arizona	7.60
60	Augusta	Georgia	7.60
60	Casper	Wyoming	7.60

[Table 4-1] (*cont.*)Results in Privacy/Security (2008)

Ranking	City	State	Score
64	Milwaukee	Wisconsin	7.20
64	Jersey City	New Jersey	7.20
66	Phoenix	Arizona	6.80
66	Dover	Delaware	6.80
68	Madison	Wisconsin	6.40
68	Anchorage	Alaska	6.40
68	Billings	Montana	6.40
68	Boise City	Idaho	6.40
68	Charleston	South Carolina	6.40
73	Birmingham	Alabama	6.00
74	Honolulu	Hawaii	5.60
74	Jacksonville	Florida	5.60
74	Fairbanks	Alaska	5.60
77	San Antonio	Texas	5.20
78	Overland Park	Kansas	4.80
78	Wilmington	Delaware	4.80
78	Lewiston	Maine	4.80
78	Bismarck	North Dakota	4.80
82	Salem	Oregon	4.00
82	Las Vegas	Nevada	4.00
84	Missoula	Montana	3.20
85	Frederick	Maryland	2.40
85	Bridgeport	Connecticut	2.40
85	Lexington	Kentucky	2.40
85	Little Rock	Arkansas	2.40
85	Worcester	Massachusetts	2.40
90	Portland	Maine	2.00
91	New Haven	Connecticut	1.20
92	West Valley City	Utah	0.00
92	Nashua	New Hampshire	0.00
92	Columbia	South Carolina	0.00
92	Burlington	Vermont	0.00

[Table 4-1] (*cont.*)Results in Privacy/Security (2008)

Ranking	City	State	Score
92	Rapid City	South Dakota	0.00
92	Nampa	Idaho	0.00
92	Charleston	West Virginia	0.00
92	Gulfport	Mississippi	0.00
92	Rutland	Vermont	0.00
92	Hilo	Hawaii	0.00

Table 4-2 represents the average score by region for the category of Privacy/Security. The average score for all cities is 7.94, with cities in the Midwest ranked the highest with an average score of 9.77. Figure 4-1 illustrates the data presented in Table 4-2.

[Table 4-2] Average Score in Privacy/Security by Region (2008)

	Midwest	Average	South	West	Northeast
Privacy Averages	9.77	**7.97**	7.81	7.52	6.49

[Figure 4-1] Average Score in Privacy/Security by Region (2008)

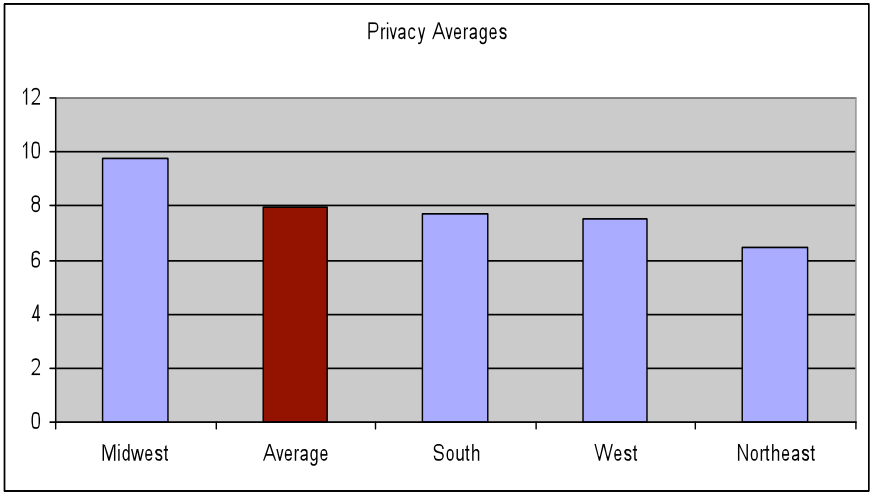


Table 4-3 lists the results of evaluation of key aspects in the category of Privacy/Security by region. While cities in the Midwest and West have a greater probability of developing a privacy statement, those in the South and Northeast have a lower probability of having a privacy statement.

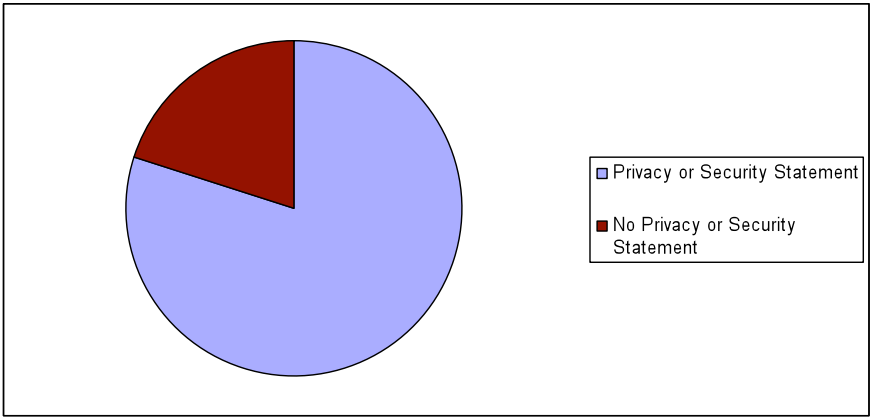
With regard to the use of encryption in the transmission of data, half of all cities evaluated in the Midwest, as well as 41% of cities in the Northeast, 40% in the West, and 39% of cities in the South, have a policy addressing the use of encryption on their websites. The overall percentage for cities that have a policy addressing the use of encryption online is 42%. In addition, 71% of cities evaluated in the Midwest, 62% of cities in the West, and 56% of cities in the South have a policy addressing the use of "cookies" or "web beacons" to track users. The overall percentage for cities that have a policy addressing the use of "cookies" or "web beacons" to track users is 61%.

[Table 4-3] Results for Privacy/Security by Region (2008)

	Average	Midwest	Northeast	South	West
Privacy or Security Policy	**80%**	94%	63%	77%	81%
Use of encryption	**42%**	50%	41%	39%	40%
Use of cookies	**61%**	71%	53%	56%	62%
Digital Signature	**3%**	4%	0	6%	0

On average, about 80% of all cities evaluated have developed a privacy or security statement/policy as depicted by Fig 4-2.

[Figure 4-2] Existence of Privacy or Security Statement (2008)



5

USABILITY

The following chapter highlights the results for Usability. Results indicate that Washington DC, New York, San Diego, Minneapolis, Portland, OR and Manchester are top ranked cities in the category of Usability. Washington is ranked first with a score of 18.75, while New York follows in the second position with a score of 17.19 points. San Diego and Minneapolis is ranked third with scores of 16.57 and 16.26 respectively, followed by Portland, OR and Manchester with score of 15.63. Table 5-1 summarizes the results for all the municipalities evaluated in this category.

The average score in this category is 12.10, with cities in the Midwest ranked the highest with an average score of 12.63. Cities in the Northeast scored 12.02 on average in this category, followed by the cities in the West and South with scores of 11.97 and 11.86 respectively.

[Table 5-1] Results in Usability (2008)

Ranking	City	State	Score
1	Washington	District of Columbia	18.75
2	New York	New York	17.19
3	San Diego	California	16.57
4	Minneapolis	Minnesota	16.26
5	Portland	Oregon	15.63
5	Manchester	New Hampshire	15.63
7	Boston	Massachusetts	15.32
7	Phoenix	Arizona	15.32
9	St. Paul	Minnesota	15.01
10	New Orleans	Louisiana	15.00
10	Baton Rouge	Louisiana	15.00
12	Chicago	Illinois	14.69
12	San Antonio	Texas	14.69
12	Huntington	West Virginia	14.69
12	Albuquerque	New Mexico	14.69
12	Augusta	Georgia	14.69
17	Salt Lake City	Utah	14.38
17	Denver	Colorado	14.38
17	Sioux Falls	South Dakota	14.38
20	Seattle	Washington	14.07
20	Raleigh	North Carolina	14.07
20	Lincoln	Nebraska	14.07
20	Overland Park	Kansas	14.07
20	West Valley City	Utah	14.07
25	Columbus	Ohio	13.76
25	Louisville	Kentucky	13.76
27	Newark	New Jersey	13.75
28	Virginia Beach	Virginia	13.44
28	Tulsa	Oklahoma	13.44
30	Los Angeles	California	13.13
30	Buffalo	New York	13.13

[Table 5-1] (*cont.*) Results in Usability (2008)

Ranking	City	State	Score
30	Grand Rapids	Michigan	13.13
30	Atlanta	Georgia	13.13
30	Casper	Wyoming	13.13
35	St. Louis	Missouri	12.82
35	Des Moines	Iowa	12.82
35	Las Cruces	New Mexico	12.82
35	Memphis	Tennessee	12.82
35	Fargo	North Dakota	12.82
35	Aurora	Illinois	12.82
35	Jackson	Mississippi	12.82
42	Cleveland	Ohio	12.51
42	Providence	Rhode Island	12.51
42	Henderson	Nevada	12.51
42	Madison	Wisconsin	12.51
42	Jersey City	New Jersey	12.51
47	Wichita	Kansas	12.50
47	Cedar Rapids	Iowa	12.50
48	Houston	Texas	12.19
48	Baltimore	Maryland	12.19
48	Dover	Delaware	12.19
48	Nashua	New Hampshire	12.19
48	Bismarck	North Dakota	12.19
54	Pittsburgh	Pennsylvania	11.88
54	Billings	Montana	11.88
54	Bridgeport	Connecticut	11.88
54	Indianapolis	Indiana	11.88
54	Milwaukee	Wisconsin	11.88
54	Frederick	Maryland	11.88
54	Wilmington	Delaware	11.88
54	Little Rock	Arkansas	11.88
62	Kansas City	Missouri	11.57

[Table 5-1] (*cont.*) Results in Usability (2008)

Ranking	City	State	Score
62	Tucson	Arizona	11.57
62	Detroit	Michigan	11.57
62	Salem	Oregon	11.57
62	Anchorage	Alaska	11.57
67	New Haven	Connecticut	11.26
68	Nashville	Tennessee	11.25
68	Colorado Springs	Colorado	11.25
68	Honolulu	Hawaii	11.25
71	Lexington	Kentucky	10.94
71	Columbia	South Carolina	10.94
73	Charlotte	North Carolina	10.63
73	Montgomery	Alabama	10.63
73	Birmingham	Alabama	10.63
73	Portland	Maine	10.63
73	Rutland	Vermont	10.63
78	Philadelphia	Pennsylvania	10.32
78	Warwick	Rhode Island	10.32
80	Spokane	Washington	10.01
80	Las Vegas	Nevada	10.01
80	Fort Wayne	Indiana	10.01
80	Cheyenne	Wyoming	10.01
84	Charleston	South Carolina	10.00
85	Omaha	Nebraska	9.69
85	Lewiston	Maine	9.69
85	Burlington	Vermont	9.69
88	Oklahoma City	Oklahoma	9.38
88	Miami	Florida	9.38
88	Jacksonville	Florida	9.38
91	Fort Smith	Arkansas	9.07
91	Boise City	Idaho	9.07
93	Norfolk	Virginia	8.76

[Table 5-1] (*cont.*) Results in Usability (2008)

Ranking	City	State	Score
94	Missoula	Montana	8.44
95	Fairbanks	Alaska	8.13
95	Hilo	Hawaii	8.13
97	Worcester	Massachusetts	7.82
97	Rapid City	South Dakota	7.82
97	Nampa	Idaho	7.82
100	Gulfport	Mississippi	6.88
101	Charleston	West Virginia	5.01

Table 5-2 represents the average score by region for the category of Usability. The average score in this category is 12.10, with cities in the Midwest ranked the highest with an average score of 12.63. Figure 5-1 illustrates the data presented in Table 5-2.

[Table 5-2] Average Score in Usability by Region (2008)

	Midwest	Average	Northeast	West	South
Usability Averages	12.63	**12.10**	12.02	11.97	11.86

[Figure 5-1] Average Score in Usability by Region (2008)

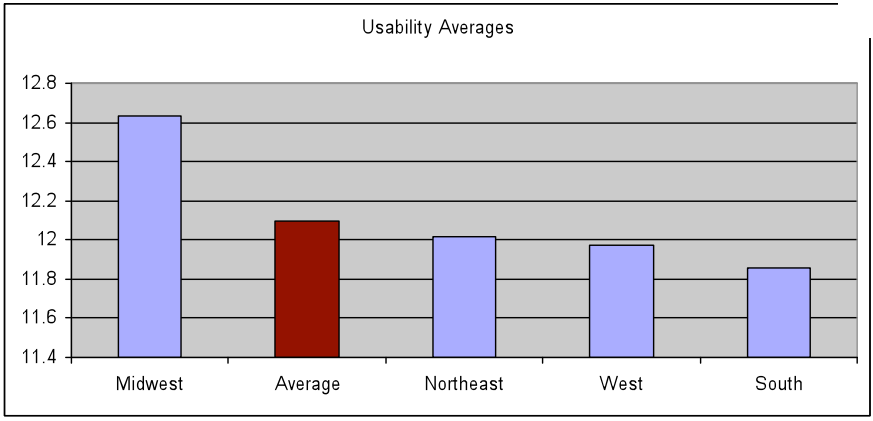


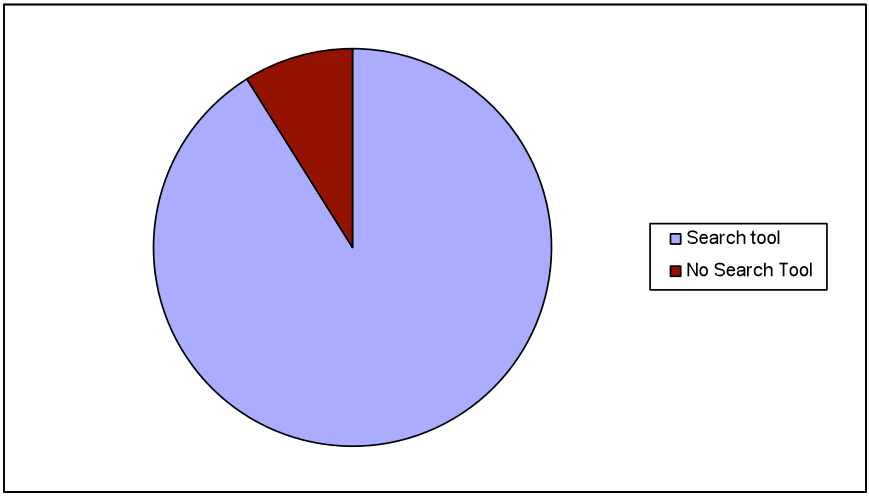
Table 5-3 lists the results of the evaluation of key aspects in the category of Usability by region. In terms of homepage length, with text size set to "medium" at the "view" menu of Internet Explorer on a 20 inch monitor, cities in the Northeast, West and Midwest score above average, while cities in the South are below average. That is, under the conditions above, many cities in the Northeast, West and Midwest require two screens or less to view the main city homepage.

With respect to targeted audience links, 69% of cities in the Midwest, 56% of cities in the Northeast and 44% in the South have the targeted audience links divided into more than three categories (e.g. general citizens, youths, the old, women, family, citizens in need of social welfare services, businesses, industry, small businesses, public employees, etc.), while on average 49% of all cities have such links. Also, as to a search tool, 97% in the Northeast and 96% in the Midwest provide search tools online.

[Table 5-3] Results for Usability by Region (2008)

	Average	Northeast	West	Midwest	South
Homepage Length	**64%**	69%	69%	65%	58%
Targeted Audience Links	**49%**	56%	35%	69%	44%
Search Tool	**91%**	97%	87%	96%	88%

[Figure 5-2] Availability of Search Tools (2008)


Search tool
No Search Tool

6

CONTENT

The following chapter highlights the results for Content. Results indicate that Sioux Falls, Philadelphia, Portland OR, San Antonio and Washington DC are top ranked cities in the category of Content. Sioux Falls is ranked first with a score of 15.0, while Philadelphia follows in the second position with a score of 14.60 points. Portland is ranked third with a score of 14.40, followed by San Antonio and Washington DC with a score of 14.20 each. Table 6-1 summarizes the results for all the municipalities evaluated in this category.

The average score in this category is 10.18, with cities in the Midwest ranked the highest with an average score of 10.63. Cities in the South scored 10.16 on average in this category, followed by cities in the West and Northeast with scores of 10.12 and 9.16, respectively.

[Table 6-1] Results in Content (2008)

Ranking	City	State	Score
1	Sioux Falls	South Dakota	15.00
2	Philadelphia	Pennsylvania	14.60
3	Portland	Oregon	14.40
4	San Antonio	Texas	14.20
4	Washington	District of Columbia	14.20
6	Salt Lake City	Utah	14.00
7	St. Paul	Minnesota	13.60
8	New York	New York	13.40
8	New Orleans	Louisiana	13.40
8	Virginia Beach	Virginia	13.40
11	Minneapolis	Minnesota	13.20
11	Columbus	Ohio	13.20
11	Seattle	Washington	13.20
11	Baton Rouge	Louisiana	13.20
15	Salem	Oregon	13.00
16	Las Cruces	New Mexico	12.60
17	Boston	Massachusetts	12.40
18	Louisville	Kentucky	12.20
18	Indianapolis	Indiana	12.20
18	Milwaukee	Wisconsin	12.20
18	Honolulu	Hawaii	12.20
22	Albuquerque	New Mexico	12.00
23	Raleigh	North Carolina	11.80
23	Colorado Springs	Colorado	11.60
25	Los Angeles	California	11.40
25	Phoenix	Arizona	11.40
25	Cedar Rapids	Iowa	11.40
28	Oklahoma City	Oklahoma	11.20
28	Nashua	New Hampshire	11.20
30	Manchester	New Hampshire	11.00
30	Norfolk	Virginia	11.00
30	Aurora	Illinois	11.00

[Table 6-1] (*cont.*) Results in Content (2008)

Ranking	City	State	Score
30	New Haven	Connecticut	11.00
30	Lewiston	Maine	11.00
35	Cleveland	Ohio	10.80
35	Wichita	Kansas	10.80
35	Chicago	Illinois	10.80
35	Pittsburgh	Pennsylvania	10.80
35	Detroit	Michigan	10.80
35	Augusta	Georgia	10.80
35	Spokane	Washington	10.80
35	Frederick	Maryland	10.80
43	Houston	Texas	10.60
43	Baltimore	Maryland	10.60
43	Overland Park	Kansas	10.60
43	Miami	Florida	10.60
47	Denver	Colorado	10.40
47	Grand Rapids	Michigan	10.40
49	St. Louis	Missouri	10.20
49	Nashville	Tennessee	10.20
49	Tucson	Arizona	10.20
52	San Diego	California	10.00
52	Charlotte	North Carolina	10.00
52	Anchorage	Alaska	10.00
55	Lincoln	Nebraska	9.80
55	West Valley City	Utah	9.80
55	Billings	Montana	9.80
55	Lexington	Kentucky	9.80
59	Buffalo	New York	9.60
59	Memphis	Tennessee	9.60
59	Providence	Rhode Island	9.60
59	Madison	Wisconsin	9.60
59	Bismarck	North Dakota	9.60
64	Tulsa	Oklahoma	9.20

[Table 6-1] (*cont.*) Results in Content (2008)

Ranking	City	State	Score
64	Fargo	North Dakota	9.20
64	Las Vegas	Nevada	9.20
64	Little Rock	Arkansas	9.20
64	Burlington	Vermont	9.20
64	Nampa	Idaho	9.20
70	Atlanta	Georgia	9.00
71	Boise City	Idaho	9.00
71	Portland	Maine	9.00
71	Columbia	South Carolina	9.00
74	Des Moines	Iowa	8.80
74	Huntington	West Virginia	8.80
74	Jackson	Mississippi	8.80
74	Wilmington	Delaware	8.80
74	Jacksonville	Florida	8.80
79	Fort Wayne	Indiana	8.60
79	Gulfport	Mississippi	8.60
81	Montgomery	Alabama	8.40
81	Bridgeport	Connecticut	8.40
81	Worcester	Massachusetts	8.40
84	Omaha	Nebraska	8.20
84	Warwick	Rhode Island	8.20
84	Birmingham	Alabama	8.20
84	Missoula	Montana	8.20
88	Dover	Delaware	8.00
89	Henderson	Nevada	7.80
89	Casper	Wyoming	7.80
89	Charleston	South Carolina	7.80
92	Rapid City	South Dakota	7.60
92	Charleston	West Virginia	7.60
94	Kansas City	Missouri	7.40
94	Fort Smith	Arkansas	7.40
96	Cheyenne	Wyoming	7.20

[Table 6-1] (*cont.*) Results in Content (2008)

Ranking	City	State	Score
97	Jersey City	New Jersey	6.60
98	Fairbanks	Alaska	6.20
99	Rutland	Vermont	5.60
100	Newark	New Jersey	5.00
101	Hilo	Hawaii	1.60

Table 6-2 represents the average score by region for the category of Content. The average score in this category is 10.18, with cities in the Midwest ranked the highest with an average score of 10.63. Figure 6-1 illustrates the data presented.

[Table 6-2] Average Score in Content by Region (2008)

	Midwest	Average	South	West	Northeast
Content Averages	10.63	**10.18**	10.16	10.12	9.72

[Figure 6-1] Average Score in Content by Region (2008)

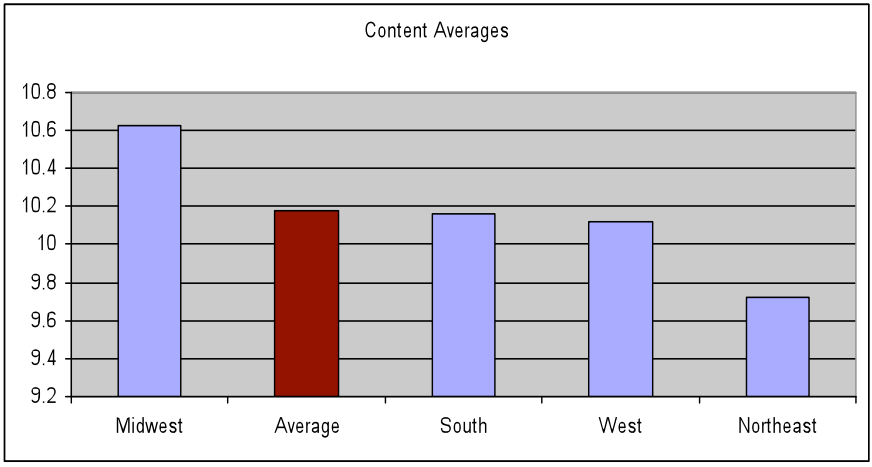


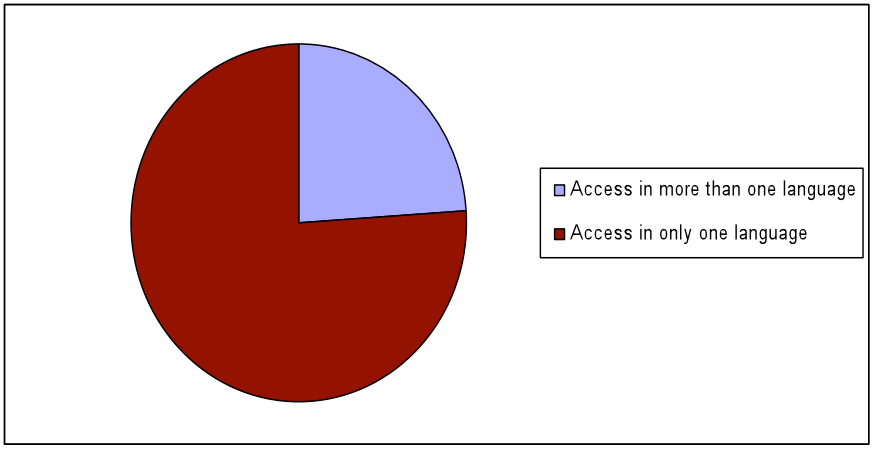
Table 6-3 indicates the results of the evaluation of Content by region. About 50% of cities evaluated have websites with mechanisms in the area of emergency management or alert mechanisms (severe weather, etc.). Also, with regard to disability access for the blind, only about 13% of cites have websites providing such access (e.g. Bobby compliant: http://www.cast.org/bobby). Cities in the South had the highest percentage of municipal websites with that feature. In addition, about 23% of cities have websites providing disability access for the deaf (TDD phone service). Cities in the West had the highest percentage of municipal websites with that feature, about 29%.

[Table 6-3] Results for Content by Region (2008)

	Average	Midwest	Northeast	South	West
Emergency Management	**50%**	60%	56%	47%	40%
Access for the Blind	**13%**	8%	13%	16%	13%
Access for the deaf	**23%**	25%	19%	19%	29%
More than one language	**24%**	31%	19%	23%	23%

Furthermore, with respect to the question “Does the site offer access in more than one language?,” only 24% of those evaluated have a website that offers access in more than one language, while only 76% of cities have no such features.

[Figure 6-2] Access in Multiple Languages (2008)



7

SERVICES

The following chapter highlights the results for the category of Services. Results indicate that Salt Lake City, Philadelphia, Washington DC, New York and New Orleans are top ranked cities in the category of Services. Salt Lake City is ranked first with a score of 14.92, while Philadelphia follows in the second position with a score of 14.07 points. Washington DC is ranked third with a score of 13.05, followed closely by New York and New Orleans with scores of 12.88 and 12.72 respectively. Table 7-1 summarizes the results for all the municipalities evaluated in this category.

The average score in this category is 8.23, with cities in the Midwest ranked the highest with an average score of 8.89. Cities in the Northeast scored 8.22 on average in this category, followed by cities in the West and South with scores of 7.98 and 7.95 respectively.

[Table 7 -1] Results in Services (2008)

Ranking	City	State	Score
1	Salt Lake City	Utah	14.92
2	Philadelphia	Pennsylvania	14.07
3	Washington	District of Columbia	13.05
4	New York	New York	12.88
5	New Orleans	Louisiana	12.72
6	Louisville	Kentucky	12.38
7	Cleveland	Ohio	12.21
8	Buffalo	New York	11.53
8	St. Paul	Minnesota	11.53
8	Nashville	Tennessee	11.53
8	Houston	Texas	11.53
8	Tucson	Arizona	11.53
13	Wichita	Kansas	11.36
14	Boston	Massachusetts	11.19
14	Raleigh	North Carolina	11.19
16	Milwaukee	Wisconsin	11.02
16	Frederick	Maryland	11.02
18	Seattle	Washington	10.85
18	Kansas City	Missouri	10.85
20	Portland	Oregon	10.68
20	Columbus	Ohio	10.68
20	St. Louis	Missouri	10.68
20	Providence	Rhode Island	10.68
20	Anchorage	Alaska	10.68
25	Los Angeles	California	10.51
25	Madison	Wisconsin	10.51
27	Virginia Beach	Virginia	10.17
27	Des Moines	Iowa	10.17
27	Lincoln	Nebraska	10.17
27	Chicago	Illinois	10.17
27	Worcester	Massachusetts	10.17
32	Honolulu	Hawaii	10.00

[Table 8-1] (*cont.*) Results in Services (2008)

Ranking	City	State	Score
33	Wilmington	Delaware	9.83
34	Atlanta	Georgia	9.66
35	Denver	Colorado	9.50
36	Charlotte	North Carolina	9.49
36	Las Vegas	Nevada	9.49
38	San Antonio	Texas	9.32
38	Oklahoma City	Oklahoma	9.32
40	New Haven	Connecticut	9.16
41	Manchester	New Hampshire	9.15
42	Grand Rapids	Michigan	8.99
43	Colorado Springs	Colorado	8.98
43	Memphis	Tennessee	8.98
45	Minneapolis	Minnesota	8.82
45	Baton Rouge	Louisiana	8.82
45	Cedar Rapids	Iowa	8.82
45	Tulsa	Oklahoma	8.82
45	West Valley City	Utah	8.82
50	Montgomery	Alabama	8.64
51	Phoenix	Arizona	8.48
51	Pittsburgh	Pennsylvania	8.48
51	Detroit	Michigan	8.48
54	Fargo	North Dakota	8.31
54	Omaha	Nebraska	8.31
56	Salem	Oregon	8.14
56	Bridgeport	Connecticut	8.14
58	Las Cruces	New Mexico	7.97
59	San Diego	California	7.80
60	Missoula	Montana	7.63
61	Albuquerque	New Mexico	7.46
61	Jersey City	New Jersey	7.46
63	Norfolk	Virginia	7.29

[Table 7-1] (*cont.*) Results in Services (2008)

Ranking	City	State	Score
63	Henderson	Nevada	7.29
65	Augusta	Georgia	7.29
65	Overland Park	Kansas	7.29
67	Indianapolis	Indiana	7.12
68	Sioux Falls	South Dakota	6.95
69	Baltimore	Maryland	6.61
69	Casper	Wyoming	6.61
69	Fort Wayne	Indiana	6.61
72	Dover	Delaware	6.44
72	Nashua	New Hampshire	6.44
72	Jacksonville	Florida	6.44
75	Portland	Maine	6.27
76	Boise City	Idaho	5.77
77	Lewiston	Maine	5.76
78	Huntington	West Virginia	5.60
78	Cheyenne	Wyoming	5.60
80	Charleston	South Carolina	5.59
81	Rapid City	South Dakota	5.43
81	Charleston	West Virginia	5.43
83	Newark	New Jersey	5.42
84	Lexington	Kentucky	5.26
84	Columbia	South Carolina	5.26
86	Spokane	Washington	5.09
86	Warwick	Rhode Island	5.09
88	Fort Smith	Arkansas	4.92
88	Billings	Montana	4.92
88	Birmingham	Alabama	4.92
91	Aurora	Illinois	4.75
92	Little Rock	Arkansas	4.58
92	Burlington	Vermont	4.58
94	Bismarck	North Dakota	4.24
95	Fairbanks	Alaska	3.90

[Table 7-1] (*cont.*) Results in Services (2008)

Ranking	City	State	Score
96	Jackson	Mississippi	3.73
96	Miami	Florida	3.73
98	Nampa	Idaho	3.05
99	Gulfport	Mississippi	2.89
100	Hilo	Hawaii	1.87
101	Rutland	Vermont	1.53

Table 7-2 represents the average score by region for the category of Services. The average score in this category is 8.23, with cities in the Midwest ranked the highest with an average score of 8.89. Figure 7-1 illustrates the data presented in Table 7-2.

[Table 7-2] Average Score in Services by Region (2008)

	Midwest	Northeast	Average	West	South
Services Averages	8.89	8.22	**8.18**	7.98	7.95

[Figure 7-1] Average Score in Services by Region (2008)

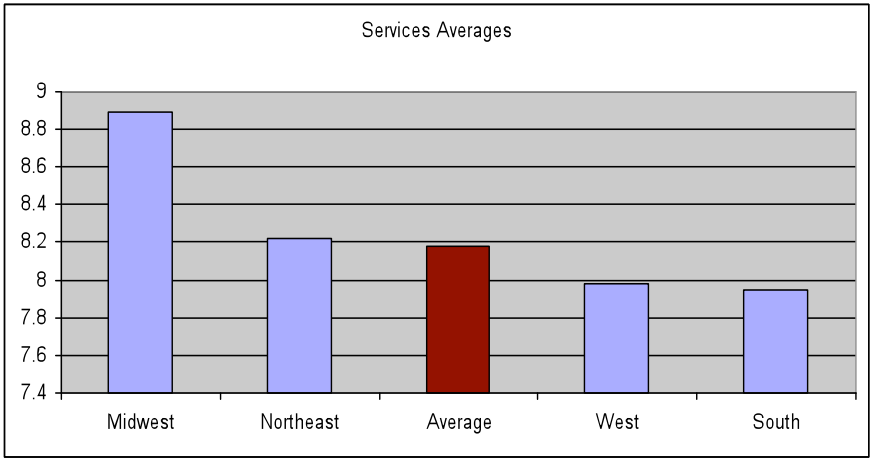


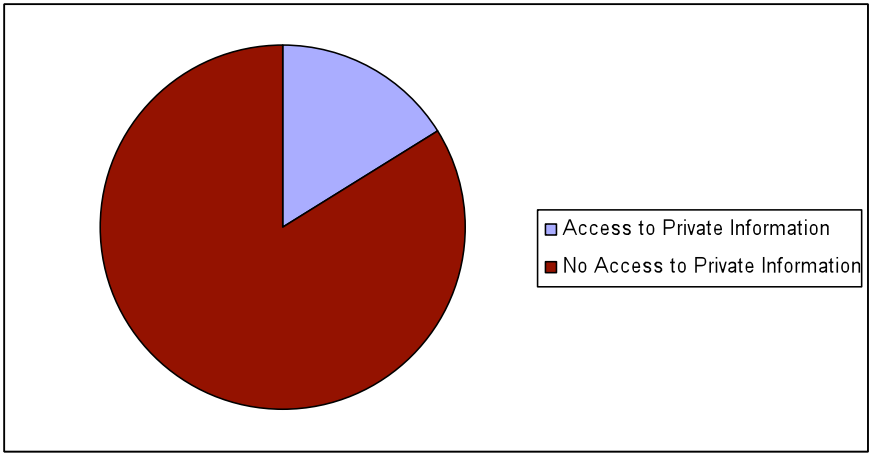
Table 7-3 indicates the results of key aspects selected in the category of Service delivery by region. With regard to searchable databases, more than 60% of cities in the Northeast and Midwest have websites offering a searchable database, while less than 60% of cities evaluated in the West and South have sites offering that capacity. In terms of portal customization, only about 6% of all cities across the United States allow users to customize the main city homepage, depending on their needs. In addition, with respect to access to private information online (e.g. educational records, medical records, point total of driving violations, lost pet dogs, lost property), about 20% of cities in the Northeast and Midwest allow users to access such data.

[Table 7-3] Results for Services by Region (2008)

	Average	Northeast	Midwest	West	South
Searchable Database	**64%**	81%	76%	55%	53%
Portal Customization	**6%**	6%	2%	2%	13%
Access to Private Info	**16%**	22%	19%	12%	14%

Overall, only about 16% of all cities evaluated allow access to private information online in response to the question "Does the site allow access to private information online (e.g. educational records, medical records, point total of driving violations, lost pet dogs, lost property)?" Over 80% of cities do not allow such access. Figure 7-2 illustrates this finding.

[Figure 7-2] Access to Private Information Online (2008)



8

CITIZEN PARTICIPATION

The following chapter highlights the results for Citizen Participation. Results indicate that Washington DC, Los Angeles, Minneapolis, Portland OR, and Des Moines are top ranked cities in the category of Citizen Participation. Washington DC is ranked first with a score of 11.64, while Los Angeles follows in the second position with a score of 10.0 points. Minneapolis is ranked third with a score of 9.46, followed closely by Portland and Des Moines with scores of 8.73 and 8.19 respectively. Table 8-1 summarizes the results for all the municipalities evaluated in this category.

The average score in this category is 3.57, which can be attributed to the lack of support for such online citizen participation practices among municipalities. Overall, cities in the Midwest ranked the highest among the regions with an average score of 3.93, while cities in the West scored 3.83 on average in this category. They are followed by cities in the South and Northeast with scores of 3.63 and 2.59 respectively.

[Table 8-1] Results in Citizen Participation (2008)

Ranking	City	State	Score
1	Washington	District of Columbia	11.64
2	Los Angeles	California	10.00
3	Minneapolis	Minnesota	9.46
4	Portland	Oregon	8.73
5	Des Moines	Iowa	8.19
6	Nashville	Tennessee	7.46
7	Virginia Beach	Virginia	7.27
8	San Diego	California	6.55
9	New York	New York	6.18
10	Denver	Colorado	6.00
11	Sioux Falls	South Dakota	5.82
12	New Orleans	Louisiana	5.64
12	Louisville	Kentucky	5.64
12	St. Louis	Missouri	5.64
12	Indianapolis	Indiana	5.64
16	Norfolk	Virginia	5.46
17	Cleveland	Ohio	5.10
18	Las Vegas	Nevada	5.09
19	Boston	Massachusetts	4.91
19	West Valley City	Utah	4.91
19	Tulsa	Oklahoma	4.91
22	Phoenix	Arizona	4.73
22	Charlotte	North Carolina	4.73
22	Philadelphia	Pennsylvania	4.73
22	St. Paul	Minnesota	4.73
22	Salem	Oregon	4.73
27	Columbus	Ohio	4.55
27	Oklahoma City	Oklahoma	4.55
29	Salt Lake City	Utah	4.37
29	Seattle	Washington	4.37
29	Rapid City	South Dakota	4.37
32	Baltimore	Maryland	4.36

[Table 8-1] (*cont.*) Results in Citizen Participation (2008)

Ranking	City	State	Score
33	Houston	Texas	4.18
33	Kansas City	Missouri	4.18
33	Albuquerque	New Mexico	4.18
33	Henderson	Nevada	4.18
37	San Antonio	Texas	4.00
37	Atlanta	Georgia	4.00
37	Omaha	Nebraska	4.00
40	Colorado Springs	Colorado	3.82
40	Overland Park	Kansas	3.82
42	Manchester	New Hampshire	3.64
42	Las Cruces	New Mexico	3.64
42	Cedar Rapids	Iowa	3.64
42	Fargo	North Dakota	3.64
46	Huntington	West Virginia	3.46
46	Memphis	Tennessee	3.46
46	Frederick	Maryland	3.46
49	Little Rock	Arkansas	3.28
50	Milwaukee	Wisconsin	3.09
50	Lexington	Kentucky	3.09
52	Lincoln	Nebraska	2.91
52	Baton Rouge	Louisiana	2.91
52	Providence	Rhode Island	2.91
52	Honolulu	Hawaii	2.91
56	Raleigh	North Carolina	2.73
56	Buffalo	New York	2.73
56	Madison	Wisconsin	2.73
56	Bridgeport	Connecticut	2.73
56	Nashua	New Hampshire	2.73
56	Grand Rapids	Michigan	2.73
56	Montgomery	Alabama	2.73
63	Spokane	Washington	2.55

[Table 8 -1] (*cont.*) Results in Citizen Participation (2008)

Ranking	City	State	Score
63	Aurora	Illinois	2.55
63	Boise City	Idaho	2.55
63	Burlington	Vermont	2.55
67	Tucson	Arizona	2.37
67	Anchorage	Alaska	2.37
67	Fort Smith	Arkansas	2.37
67	Warwick	Rhode Island	2.37
67	Billings	Montana	2.37
72	Columbia	South Carolina	2.36
73	Casper	Wyoming	2.19
73	Miami	Florida	2.19
73	Charleston	South Carolina	2.19
76	Wilmington	Delaware	2.18
77	Wichita	Kansas	2.00
77	Detroit	Michigan	2.00
77	Worcester	Massachusetts	2.00
77	Missoula	Montana	2.00
81	Jacksonville	Florida	1.82
81	Pittsburgh	Pennsylvania	1.82
81	Jersey City	New Jersey	1.82
81	Dover	Delaware	1.82
85	New Haven	Connecticut	1.64
85	Hilo	Hawaii	1.64
85	Bismarck	North Dakota	1.64
85	Charleston	West Virginia	1.64
89	Augusta	Georgia	1.46
89	Jackson	Mississippi	1.46
91	Newark	New Jersey	1.28
91	Birmingham	Alabama	1.28
91	Nampa	Idaho	1.28
94	Lewiston	Maine	1.27
95	Chicago	Illinois	1.09

[Table 8-1] (*cont.*) Results in Citizen Participation (2008)

Ranking	City	State	Score
95	Cheyenne	Wyoming	1.09
97	Fort Wayne	Indiana	0.91
97	Fairbanks	Alaska	0.91
99	Portland	Maine	0.73
100	Rutland	Vermont	0.55
101	Gulfport	Mississippi	0.00

Table 8-2 represents the average score by region for the category of Citizen Participation. The average score in this category is 3.57, with the Midwest ranked the highest with an average score of 3.93. Figure 8-1 illustrates the data presented in Table 8-2.

[Table 8-2] Average Score in Citizen Participation by Region (2008)

	Midwest	West	South	Average	Northeast
Citizen Participation	3.93	3.83	3.63	**3.48**	2.59

[Figure 8-1] Average Score in Citizen Participation by Region (2008)

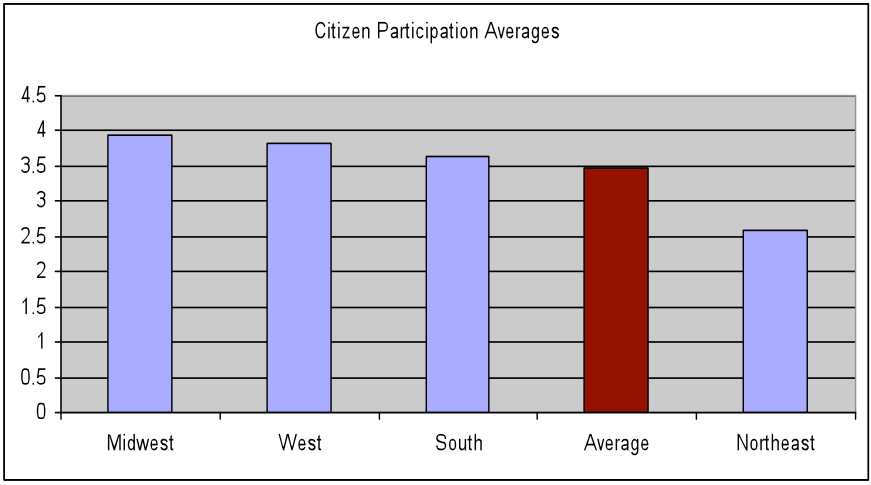
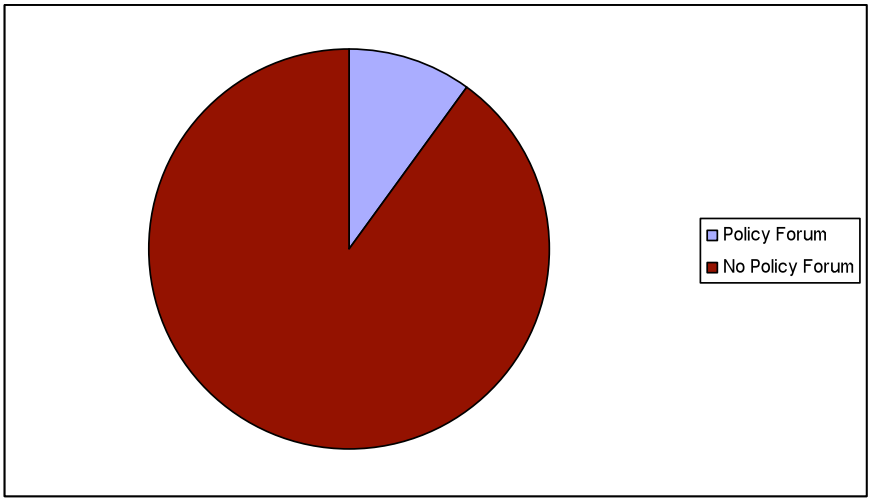


Table 8-3 indicates the results of key aspects selected for the category of Citizen Participation by region. In response to the question "Does the website allow users to provide comments or feedback to individual departments/agencies through online forms?" 11% of municipalities provide a mechanism allowing comments or feedback through online forms. With respect to online bulletin board or chat capabilities for gathering citizen input on public issues ("Online bulletin board" or "chat capabilities" means the city website where any citizens can post ideas, comments, or opinions without specific discussion topics.), about 5% do have these capabilities. With regard to online discussion forums on policy issues ("Online discussion forum" means the city websites where the city arranges public consultation on policy issues and citizens participate in discussing those specific topics.), 10% of municipalities evaluated do have a site containing an online discussion forum, while data from citywide performance measurement systems are being increasingly provided by the municipal websites of more than 16% of the cities evaluated.

[Table 8-3] Results for Citizen Participation by Region (2008)

	Average	Midwest	Northeast	South	West
Feedback Form	**11%**	10%	13%	6%	17%
Bulletin Board	**5%**	6%	3%	2%	8%
Policy Forum	**10%**	8%	9%	13%	8%
Performance Measurement	**16%**	13%	13%	20%	17%

[Figure 8-2] Online Policy Forums (2008)



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CONCLUSION

The study of municipal e-governance practices throughout the United States is an area that clearly requires ongoing research. This study has produced findings that contribute to the e-governance literature, in particular in the areas of website Privacy/Security, Usability, Content, Services, and Citizen Participation. The 2008 study highlights the increased attention spent on Usability and Content, and the need for further attention in the area of Privacy, Services and Citizen Participation. Similar to our finding in the global surveys, citizen participation has recorded the lowest score among the five categories (Holzer & Kim, 2007). Cities have yet to recognize the importance of involving and supporting citizen participation online. A promising finding in terms of citizen participation however is the growing tendency among municipalities to publish performance measurement data on their websites.

In addition, there exists a digital gap between the largest and the second-largest municipalities in average scores as well as the individual categories. In many states, the digital divide may imply more than access to the internet alone; this divide refers to access to basic infrastructure like telephone, electricity, communication etc. We therefore recommend developing a comprehensive policy for bridging that divide. That comprehensive policy should include capacity building for municipalities, including information infrastructure, content, applications and access for individuals, as well as appropriate computer education.

The continued study of municipalities worldwide, with a second evaluation planned in 2010, will further provide insights into the direction and performance of e-governance throughout the

United States. As municipalities seek to increase their municipal website performance, identifying models within their region is an opportunity to identify e-governance benchmarks. Those municipalities that serve as top performers in their respective regions can then look at the top ranked municipalities throughout the nation, with a goal towards continuous improvement of government services delivery online.

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APPENDIX

APPENDIX A

Privacy/ Security	
1-2. A privacy or security statement/policy 3-6. Data collection 7. Option to have personal information used 8. Third party disclosures 9. Ability to review personal data records 10. Managerial measures 11. Use of encryption	12. Secure server 13. Use of "cookies" or "Web Beacons" 14. Notification of privacy policy 15. Contact or e-mail address for inquiries 16. Public information through a restricted area 17. Access to nonpublic information for employees 18. Use of digital signatures
Usability	
19-20. Homepage, page length. 21. Targeted audience 22-23. Navigation Bar 24. Site map	25-27. Font Color 30-31. Forms 32-37. Search tool 38. Update of website
Content	
39. Information about the location of offices 40. Listing of external links 41. Contact information 42. Minutes of public 43. City code and regulations 44. City charter and policy priority 45. Mission statements 46. Budget information 47-48. Documents, reports, or books (publications)	49. GIS capabilities 50. Emergency management or alert mechanism 51-52. Disability access 53. Wireless technology 54. Access in more than one language 55-56. Human resources information 57. Calendar of events 58. Downloadable documents

Service	
59-61. Pay utilities, taxes, fines 62. Apply for permits 63. Online tracking system 64-65. Apply for licenses 66. E-procurement 67. Property assessments 68. Searchable databases 69. Complaints 70-71. Bulletin board about civil applications	72. FAQ 73. Request information 74. Customize the main city homepage 75. Access private information online 76. Purchase tickets 77. Webmaster response 78. Report violations of administrative laws and regulations
Citizen Participation	
79-80. Comments or feedback 81-83. Newsletter 84. Online bulletin board or chat capabilities 85-87. Online discussion forum on policy issues 88-89. Scheduled e-meetings for discussion	90-91. Online survey/ polls 92. Synchronous video 93-94. Citizen satisfaction survey 95. Online decision-making 96-98. Performance measures, standards, or benchmarks

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