E-Governance in Central Texas: Patterns of e-Gov Adoption in Smaller Cities

By

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An Applied Research Project

(Political Science 5397)

Submitted to the Department of Political Science

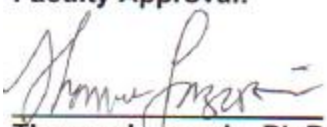
Texas State University

In Partial Fulfillment for the Requirements for the Degree of

Master of Public Administration

Fall, 2011

Faculty Approval:



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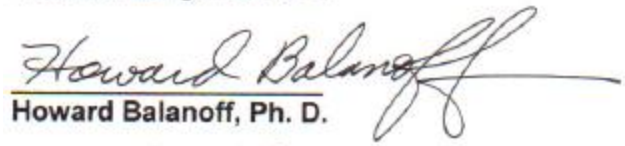

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Abstract

Electronic government, or e-Government, has become a staple of local governments across the US. While nearly every large city has embraced this trend, the extent that small cities (less than 5000 population) have adopted e-Government practices is virtually unknown. The purpose of this research is to describe the patterns of adoption of electronic government (e-gov) by smaller municipalities in Central Texas. Governments at all levels should recognize the capability of e-Government to provide external and internal service channels (Layne and Lee 2001, 129). Small local governments face a dilemma due to lesser economies of scale and less demand for e-government from residents. However, an emerging population of digital natives increasingly views electronic access to and by government as both essential and a mark of competence (Welch 2005, 378).

This research uses content analysis and a simple survey to assess the patterns of adoption of e-gov by the 36 municipalities in the Texas Capital Area Council of Governments area that range in population from 500 to 5000. It finds that small cities have high rates of adoption for electronic services (e-Services) and electronic administration (e-Administration). However, the rate of adoption of information and communications technologies to advance citizen empowerment (e-Democracy) is assessed as “fair”. Recommendations are included to authenticate official presence, increase transparency, and examine policies inhibiting local governments’ responsiveness.

About the Author

John Sone has been an independent government relations consultant since his retirement from the United States Army in 2007. Much of his thirty-year career was as an Active Guard Reserve (AGR) officer, half in Armor and Infantry units and half in higher level staffs. His skill designation was in Force Management, which addresses the long term integrated programming of Army forces' manpower, equipment, facilities, and modernization. His final assignment was as Senior Strategic Planner for the Office of the Assistant Secretary of the Army (Manpower and Reserve Affairs). He is a graduate of the United States Air Force Air War College, United States Army Command and General Staff College, and Thomas Edison State College. He was awarded the United States Legion of Merit for military service, and is a member of the Pi Alpha Alpha National Public Administration Honor Society.

He thanks his nation for the privilege of service, his fellow veterans for their remarkable spirit, and his fellow citizens for a magnificent Post 9/11 GI Bill. And he thanks his friends and his family, about which his entire life has revolved, for their unswerving belief in him.

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CHAPTER 1: Introduction

> "The Internet and the world-wide-web are wonderful tools that cities can utilize for many purposes. With the rapid growth of the technology, these tools may soon become vital to the daily operations of cities" (Kirchoff 1997).

This prediction only a few years after the Internet became generally available via the World Wide Web seems very optimistic. But it was accurate. Barely three years later, the International City/County Management Association (ICMA) concluded that 80% of US local governments had established websites (Holden et al 2003, 334). However, there is some evidence that "only a small proportion of local government websites provide residents with meaningful opportunities to gain tangible benefits through a series of online transactions" (Wohlers 2010, 101).

Today, having a website is not enough. E-government (e-gov) expectations go well beyond a basic page that provides minimal information to residents. Constituents expect to go online and complete basic transactions (Smith 2010, 2). As the digitally native portion of their constituencies increases, smaller local governments will be challenged to raise their "extremely low" level of e-gov sophistication (Wohlers 2010, 94). How they harness Information and Communications Technologies (ICT) to increase efficiency and transparency will be a source of competitive advantage. Can cities avoid the temptation to manipulate public opinion and deflect democratic energy?

What, if any, digital rights will they furnish their citizens: responsiveness, privacy, governmental transparency?

The E-Government Movement

The year 2000 yielded the first Presidential webcast, announcing the unified web presence of the US federal government in “Firstgov.Gov”. This trend toward e-gov accelerated throughout the decade. The American Society for Public Administration noted that e-gov is more than a website, capturing the breadth of e-gov with this expansive definition of it in 2001:

> (T)he use of all information and communication technologies, from fax machines to wireless palm pilots, to facilitate the daily administration of government (UN and ASPA 2001, 1).

The International City/County Management Association has monitored the growth of e-gov in US cities with a population over 10,000 for a decade. In 2000, 83% of these cities reported the presence of a website (Norris 2001, 6) while 97% reported having one in 2011 (ICMA 2011, 1). These reports reveal increases in the percentage of cities offering online requests for services (from 34% to 57%), requests for local government records (from 32% to 50%), applications for permits (from 9% to 34%), and video streaming (from 6% to 50%). Categories not contemplated in 2000, but reported in 2011 found 27% of cities using cloud computing, 68% facilitating citizen electronic communication directly with elected and appointed officials, and 59% providing electronic alerts to constituents (ICMA 2011).

Governments have always been dependent on technological development, particularly in communications, and have traditionally been early adopters (Coleman/Chen et al 2008, 4-5). Technological advancement historically has transformed public governance. From arms to engineering to communication, each advance in technology has extended the capability and capacity of government as well as citizen concepts of governance. Coleman (Chen et al 2008, 8) finds technology to be a constitutive element of governance, asserting: "Not only hard technologies, but modes of technical thought, have had profound effects upon governmental strategies."

Citizens in the media age have high expectations for information and transparency from their governments, such as the service provided to the citizens of Plano, Texas, depicted in Figure 1.1. Those who believe local government is doing well in sharing information are more likely to be satisfied with civic life, reflected in their appraisal of quality of life and the performance of their governments (Rainey 2011, 2). A third of online Americans use blogs, social networking sites, email, online video or text messaging to get government information (Smith 2010, 2).

Figure 1. *Fix it Plano* Response Management System

Now that three fourths of US adults are online (Smith 2010, 11) thanks to the relative ubiquity of wired and wireless broadband, e-gov is better positioned to enjoy the economy experienced by e-commerce. With most business and government entities online, the opportunity is ripe for governments to electronically manage their supply chains using e-Services, e-Administration, and e-Procurement. Unfortunately, the development of electronically managed value chains in the public sector has met with significant resistance (Panayiotou et al 2007, 213).

Maintaining efficient and effective government demands the best use of Information and Communications Technologies (ICT). Given that online transactions cost about 65 percent less than traditional "over-the-counter" service (Rudolphy and Cullison 2002, 46), it is hard to ignore the implications for the practice of public administration and governance. These savings come at a cost. For small cities, the challenges of communication and the benefits of e-commerce may not be as obvious or economically feasible. Their rates of adoption compared to larger cities may resemble the rate of adoption of smaller companies to larger ones. The next section examines e-government from the perspective of small cities.

E-Government from the Perspective of Small Cities

> "Communities need to move forward thoughtfully to stake out ambitious agendas for access, openness and transparency. If they don't, both civic engagement and our national economic prosperity are in peril." (Knight Commission 2009)

According to the 2011 ICMA survey, 97 percent of US cities with a population greater than 10,000 have websites. While this statistic is interesting, it doesn't reveal much about what the cities are actually doing in cyberspace nor does it give any indication of the returns on their investment. Two thirds of these cities reported that they used social media, the majority of which was Facebook (over 95%). The most common advantages cited were improved communications (35%) and improved customer service (35%) (ICMA 2011, 4).

From the perspective of small cities, websites may be seen as another example of an unfunded mandate. For example, some leaders in the City of Post, Texas, bemoaned having reached a population of 5,000 because of all the new requirements the city would have to meet including maintenance of a website (Young 2011). While this concern was unwarranted and there is no specific requirement as of this writing, this vignette reveals some anxiety and resistance to the tide of electronic government.

There are valid reasons for small communities to be concerned. In addition to the new expense of establishing a website, a city must consider the costs of maintaining it and keeping its content relevant. Some content is mandatory. Texas laws require the content shown in Table 1.1 in municipal websites (Texas Municipal League 2011).

Table 1.1*: Requirements for Cities that Maintain a Website in Texas*

Requirement	*Source*	*Nature*
Posting of Sex Offenders	Code of Criminal Procedure Art. 62.045	Discretionary
Broadcasting Open Meetings over Internet	Government Code Sec. 551.128	Discretionary
Post Notice of Open Meeting	Open Meetings Act Sec. 551.056	Required
Post Agenda of Open Meeting	Open Meetings Act Sec. 551.056	Required for cities with pop. over 48K
Post Annexation Plan	Local Government Code Sec. 43.052	Required
Post Notice of Annexation Hearings	Local Government Code Sec. 43.0561	Required
Post Certain Conflicts Disclosure Statements	Local Government Code Ch. 176	Required
Post Notice of Property Tax Hearings	Tax Code Sec. 26.065	Required
Post Budget	Local Government Code Sec. 102.005	Required

These requirements mean that for small cities, the decision to go from no website, or from sharing a site with the chamber of commerce, to hosting a website involves a lot more work than just putting up an informational page. Hosting a website implies a commitment for development, management and assessment of its content and a host platform, which may be performed by staff, contractors, or both. Once a small city determines to be present online, it must figure out what "best practices" (normally offered in larger cities) it can afford and sustain.

Wohlers analyzed local E-Government in a detailed content analysis of active municipal websites in 2006-2007. The findings revealed that E-Government was present in only 8.5 percent of communities between 100-1000, increasing to 37 percent for communities between 1000-2000 populations (Wohlers 2010, 94).

Research Purpose

The purpose of this research is to describe E-Government adoption by municipalities with a population between 500 and 5000 within the Capital Area Council of Governments (CAPCOG) region of Texas, a map of which is at Appendix 4. A general benefit from it will be a depiction of the dispersion of e-gov practices among similar categories of small cities, with a study population controlled for geography, and to a lesser extent political culture. The literature indicates three broad categories of E-Government: (1) e-Services; (2) e-Administration; and (3) e-Democracy. Small cities in Texas are challenged in the digital domain to deliver efficient services to constituents, realize the potential of information and communications technology (ICT), and afford their citizens greater participatory roles in their governance.

CHAPTER 2: Literature Review

Chapter Purpose

The purpose of this chapter is to review leading theories and practices of local electronic government (e-gov). Since the term was popularized in the 1993 National Performance Review, various theories of e-gov have emerged in the literature with regard to stages of maturity, levels of utility, and emerging practical ideal types.

Three categories of activity are particularly useful in describing e-gov: (1) e-Services; (2) e-Administration; and (3) e-Democracy. Key activities within each category are listed in Table 2.1, and the literature cited in support of these categories is reviewed in this chapter.

Table 2.1: Conceptual Framework

Descriptive Category of e-Government and Indicators	*Sources*
e-Services	
Accepts electronic requests	Gore 1993; Reitz 2006
Facilitates Transactions	Hiller and Belanger 2001; Layne and Lee 2001
Accepts electronic payment	Rocheleau & Wu 2005
e-Administration	
Establishes electronic identity and network	Layne and Lee 2001; Ho 2002; Reddick, 2004
Publishes electronically	Reitz 2006; Wohlers 2010
Conducts e-Procurement	Thai & Grimm 2000; Potoski 2008

e-Democracy	
Responds to communication	Coleman 2008; West 2008
Offers Transparency	Harrison 2011; Texas CPA 2011
Provides citizen forum	West 2008; Gil-Garcia & Martinez-Montoya 2007
Customizes experience	West 2008

These categories are supported in the literature; however there is little agreement as to whether e-gov is best described in terms of evolution, functionality, or patterns of adoption. A specific, enterprise-wide taxonomy of e-gov's functional parts is difficult to cite. Business and e-Commerce offer a useful distinction between the concepts of e-Services and e-Administration using the terminology of the supply chain: "a set of organizations directly linked by one or more of the upstream and downstream flows of products, services, finances, and information from a source to a customer" (Mentzner 2001, 1). In this context, e-Services may be understood as the (downstream) flow of public services that are electronically ordered and provisioned to a customer. The term e-Administration will refer to the use of ICT in the production of public goods and services, acquiring resources from upstream in the supply chain. The term e-Democracy will refer to the governance of both by electronic means, specifically political representation, decision-making, and accountability.

Progress in both e-Services and e-Administration has rapidly outpaced that of e-Democracy, i.e. government as the steward of public value and a source of citizen empowerment. While all three categories are important, e-gov has paralleled

e-commerce in that both have achieved high rates adoption thanks to their quick wins in e-Services (Wohlers 2010, 91).

e-Services

Panayiotou et al (2007, 219) define e-Services as "the use of electronic delivery for government information, programs, strategies, and services". Accepting and responding to electronic requests from constituents (external customers) is the first step in providing e-Services. The objects of these requests may range from information or services to the exercise of the First Amendment right to petition government to redress a grievance (Would you please fix the curb your trash truck broke in front of my house?). When a government responds, the exchange may effectively constitute a transaction, complete with the contractual elements of offer and acceptance (Treitel & Peel 1999, 8). A key benefit of e-gov is codified in both federal and Texas statutes and case law: parties may e-file the offer and acceptance of transactions, and electronically complete contracts and purchases (Reitz 2006, 735).

Typical e-Service applications include the display of property tax information, the payment and renewal of licenses, registration for activities, application for and award of online permits, certain court documents, online auctions, public financial reports, sales tax collections, job postings and online applications, and self-service benefits administration (Asgarkhani 2005, 160). "E-service is not a technical exercise, but rather an attempt to improve the political and social environment and to drive a fundamental change in the ways in which functions are performed" (Asgarkhani 2005, 164). Three capabilities are essential to governments' implementation of e-Services: (1) accepts electronic requests; (2) facilitates transactions; and (3) accepts electronic payment.

Accepts Electronic Requests

Electronic requests are communications to government by electronic means using information and communications technology (ICT). A defining characteristic of an electronic request is that it can be made asynchronously between two parties. Electronic requests are a form of an interaction with government that replaces correspondence, but doesn't replace personal contact.

The 1993 National Performance Review noted the challenges associated with communicating requests to government:

> Citizen access to federal government information and services is uncoordinated and not customer-friendly. Individuals must frequently contend with several different organizations and processes in order to complete a single transaction…. To receive service, a customer must know whom to contact and how to contact that organization: Government has not made public access easy. Information technologies may be employed to reduce the complexities that citizens face and consolidate actions required for providing services. (Gore 1993, IT03)

The report recommended several solutions to improved citizen access including: a one-stop 800 number calling service, one-stop government services kiosks, a government-wide one-stop bulletin board system, and an ongoing collaboration with private industry to incorporate its best practices (Gore 1993, IT03). The release of the World Wide Web standards and Mosaic browser the following year would subsume the idea of the bulletin board system and become the dominant engine of e-gov (Dawes 2008, 589).

Electronic requests to government are legally described as “e-filing” (Reitz 2006, 734). E-filing is a citizen’s ability to contact government officials and to obtain and file documents and purchase orders or invoices through electronic means and to receive or make payment by electronic funds transfers (Reitz 2006, 735). Payments by constituents are a form of e-filing, as are reports rendered by them. Fully digital transactions may be completed through the combination of the e-publication of government offerings with electronic payment by citizens (Reitz 2006, 737).

Requests for public information (or open records) from Texas cities for records that are not exempt from disclosure must be fulfilled whether the request is made in writing or electronically. However, cities may restrict routing of electronic requests to a specific individual or office. Cities that have email addresses but don’t designate a person to receive requests for open records afford their citizens great latitude for making this type of request. However, this incurs equal or greater risk of an untrained employee’s noncompliance with the act as would exist with written requests.

> *What is a governmental body’s duty to respond to e-mailed or faxed requests for copies of records?* Generally, the deadlines involved in handling an open records request are not put on hold merely because the wrong staff member received the request.… The governmental body has a duty to respond to any written requests for open records including those that are made through e-mail or by fax. However, state law provides that the governmental body can designate a person who is authorized to receive e-mail or faxed requests for open records. If the governmental body makes such a designation, the Act is only activated if the request is directed to the assigned individual (Attorney General of Texas 2010, 3).

If the requestor asks for the records to be made available in digital format, and the city has the ability to provide them, it usually must do so (Attorney General of Texas 2010, 11).

Facilitates Transactions

Early chroniclers note the importance of transactions to the evolution of e-gov. In Layne and Lee's four stage model of e-gov, the Transaction stage follows the initial stage, Catalogue. This Transaction stage is characterized by services initially obtained through the use of online forms, evolving into a working database supporting online transactions (Layne and Lee 2001, 124). Transactions could be initiated in this stage in both digitally assisted mode (online forms) and by fully automated processes (online processing).

In Hiller and Belanger's model of e-gov, the ability to initiate transactions marks the transition from the first stage, Information, to the second stage – Two way Communication featuring request and response. This stage encompasses mailing and faxing online forms and communiqués to initiate services. West's model defines this stage as the Partial Service Delivery Stage (West 2004, 17). The next stage for both models is the Transaction stage where services may be requested online, with web-based processing replacing human activity (Hiller and Belanger 2001, 15). In this stage e-gov's development pattern appears remarkably similar to that of e-commerce.

Only a fraction of local governments across the US permit citizens to request services and records, and to renew permits (Wohlers 2010, 98). Wohlers finds the sophistication implied by these services to be influenced by the prevailing political

culture (traditionalistic, individualistic, or moralistic), and that it is positively affected by the presence of professional city management (2010, 97).

Accepts Electronic Payment

Transactions requiring the transfer of money (fees, fines or deposits) are a more sophisticated aspect of e-Services. Citizens, as consumers, increasingly expect local government to accept electronic payments. Accepting electronic payment to complete a transaction is a step forward from the earliest "information" stage of e-gov to the "transactions" stage (Reddick 2004, 61). Web-based credit transactions have offered the simplest, commercially proven means of exchanging funds. Alternatives to web-based credit include Interactive Voice Response (IVR), kiosk, Automated Clearing House (ACH)-credit, and ACH-debit (Rocheleau and Wu 2005, 222).

The majority of citizens favor direct debit over web-based acceptance of credit cards because governments typically don't assess convenience fees for its use, reducing the costs of recurring bill payments (Rocheleau and Wu 2005, 223). Direct debit also offers advantages to local government in the avoidance of "hot checks" and credit card fraud. Conversely, web-based credit transactions are preferred by some consumers for non-recurring, large transactions. This can serve to bridge cash deficits or to build up "rewards" credits for large payment sums such as annual property taxes (Rocheleau and Wu 2005, 227). Accepting both types of electronic payment results in greater citizen satisfaction.

The advantages to consumers of electronic payments can be overlooked by government. Traditional government decision making criteria such as return on

investment don't consider citizen savings in the cost-benefit analysis of online applications (Rocheleau and Wu 2005, 220). These may include citizens' time, postage, opportunity and transportation costs. A business balance sheet would account for these kinds of deposits (or withdrawals) in customer care as "brand value" or "goodwill".

There are other benefits besides economic incentives to accepting electronic payments. Jarvenpaa and Rao note the bidirectional aspects of trust in e-Commerce in which both buyer and seller accumulate sufficient trust "to accept the vulnerability inherent in the potential exchange" (Shaw 2006, 232). E-filing can increase social trust by meeting citizen expectations for accomplishing transactions by modern means (Welch et al 2004, 378).

Given the importance of this functionality of e-government, the incidence of accepting electronic requests has been the subject of much research. A recent study finds cities of less than two thousand to have "extremely low e-gov sophistication", including e-payment (Wohlers 2010, 94). This lack of sophistication may signify a lost opportunity to enhance trust and a sense of value in government.

Overall, the diffusion of e-Services has created the demand for more, ultimately leading to wider implementation of e-gov. If the delivery of effective services is the work of the front-office of government, then efficient administration is the work of its back-office – acquiring resources and producing value. Just as electronic administration has proved its essentiality to business, it has a vital role to play in the business of local government.

e-Administration

Panayiotou et al (2007, 219) defines e-Administration as the “back office information systems that support the management and administrative functions of public institutions”. Common milestones in e-Administration are the establishment of an electronic identity and network, electronic publication (policy, rules and laws), and electronic procurement of goods and services.

The integration of ICTs resulting in a local government intranet is considered a key stage of e-gov maturity (Layne and Lee 2001, 132). An intranet allows an organization to share data, software, and communications access. A desirable outcome of e-gov is the horizontal integration of information systems such that online services are fully integrated with the back-office functions (Hiller and Belanger 2001, 15). In business, the end-state for this kind of information system integration is known as Enterprise Resource Planning (ERP). ERP refers to software that integrates “back-office” functions such as accounting, finance, human resources, and transaction processing systems by cross-functional sharing of data (White 2007, 146).

The required capabilities and potential for e-gov are comparable to those of its private sector counterpart and predecessor - e-Commerce. E-Commerce relies on ICTs to manage entire supply chains (Panayiotou et al 2007, 216). Public procurement, the public supply chain, is not trivial – its volume is equal to nearly one fifth of the nation’s GDP (Thai and Grimm 2000, 239). The first step in launching e-gov locally occurs when a city establishes an electronic identity and creates or connects to a network.

Establishes Electronic Identity and Network

E-gov begins with a city's digital presence. In the past, governments established their website presence largely as a result of pressure from the media, technology-literate employees, demanding citizens, and other stakeholders to "get on the 'net'" (Layne and Lee 2001, 126). Registration of the webmaster's or other e-mail address that registers the site essentially completes the establishment of the government's digital presence. Presto, an e-gov is born!

The leading U.S. authority on governmental digital presence (HowTo.Gov - http://www.howto.gov/) recommends registering government website in top level government domains (.gov or .us) as a best practice. This is detected in the uniform resource locator (URL) of the website. However local governments use a variety of domains, including .com, .org, and .net. The Texas Department of Information Resources registers websites for cities with the federal government at no charge using the following naming convention: ci.[cityname].tx.us. It expects to authorize municipal use of the state domain (texas.gov) in the future (DIR 2010). The goal of this registration is that "public trust and citizen confidence will be strengthened in the knowledge that they are using an official Texas government website" (DIR 2010).

Ho (2002, 437) notes that once a city opts to expand its website from a bureaucratic orientation, the website tends to be organized into either of two orientations: one that maximizes the most sought-after information or one optimizes navigation through it based on type of user. The information orientation reflects a philosophy of providing "one-stop shopping", and features a home page crammed full of the most frequently used information. The user orientation offers an interface tailored to

the broad types of website users (citizen, business, other government, etc.). In either case, government websites have become a norm in the past decade. West, through Brown University (2000-2007) and the Brookings Institution (2008), conducted annual surveys of state and federal e-gov practices. He noted a decade of progress, but with much left to do:

> Although considerable progress has been made over the past decade, e-government has fallen short of its potential to transform public-sector operations…Many sites misleadingly claimed to offer online services, when they were in fact only hosting PDFs of forms and documents that needed to be printed, filled out and mailed. This limits the utility of e-government. (West 2008, 3, 8)

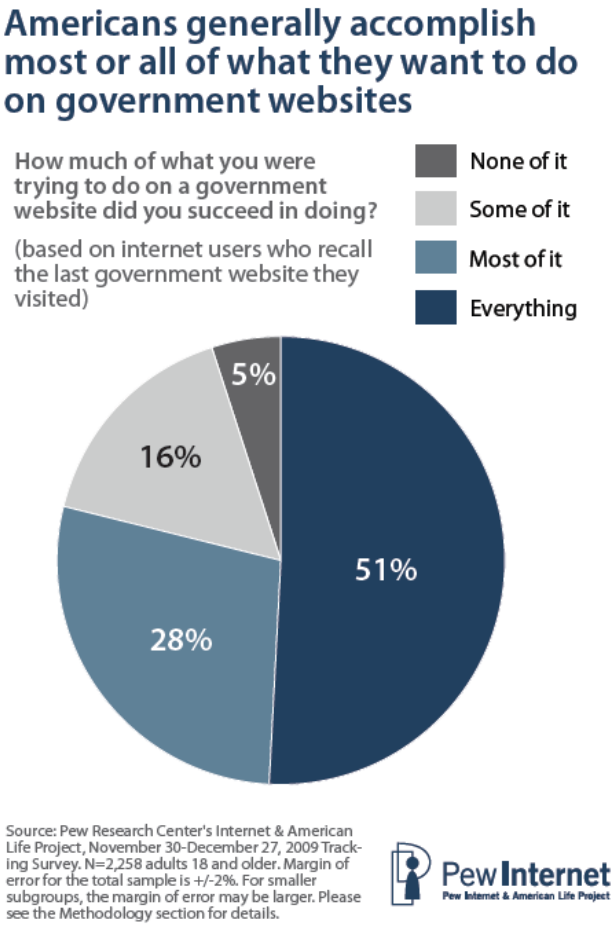


Figure 2.1: Smith (2010) / Pew Internet provided the following report on the attitudes of US users of e-gov, data from a sample taken in December 2009. (margin of error + / - 2.4 %)

Several works note the establishment of a network, whether by internet or intranet, as a fundamental step in the adoption of e-gov. Of Moon's four aspects of e-gov mentioned previously, the first noted the need for a secure intranet and central database "for more efficient and cooperative interaction among governmental agencies" (Moon 2002, 425). He observes an effect of government professionalization - a higher rate of adoption of intranets by governments with chief administrators than by mayor-council governments.

Reddick reports that the initial use of municipal intranets tends be in support of human capital (information, benefits, and job postings). The subsequent stage of website development reflects "such transactional items as online report generation, online procurement tools, project team collaboration, telecommunications access, and online training" (Reddick 2004, 74). Reddick notes the automation of a government transaction typically results in a reengineered business process. One process that has been dramatically reengineered by e-gov is the government publications process.

Publishes Electronically

Reitz approaches e-gov from a legal perspective. He finds the majority of e-gov actions fall into two categories - e-filing (previously discussed under e-Services) and e-publication. He compares e-publication to "turning the Internet into a giant bulletin board for government", facilitating constituent compliance as well as promoting transparency in government (Reitz 2006, 735). He concludes that the combination of e-publication and e-filing result in e-Procurement (Reitz 2006, 735).

By the time a government has established a digital presence, it has usually accumulated a substantial inventory of information, or content. Cities are challenged to organize this content and make it available for constituent action and information. This content must also be preserved for recordkeeping and archiving. Electronic publication is an essential attribute of the first stage of e-gov, i.e. Layne and Lee's (2001) "Catalogue" stage or Hiller and Belanger's (2001) "Information" stage. A sign of the maturity of an e-gov is how effectively it organizes the presentation of data and records of government activity for public display.

Wohlers (2010, 94) suggests the common indicators of electronic publication in municipalities would include postings of news, council meeting agendas and minutes, board/committee agendas and minutes, regulations, ordinances, finances and budget, and biographies of elected officials.[1] Making these records available provides relevant government information and facilitates constituent contact with elected and appointed officials.

The basic legal requirement for e-gov in Texas cities is the electronic publication of key public notices and information, as noted in Table 1.1. An example of a required publication is the city's Annexation plan. Subchapter C of Chapter 43 of the Texas Local Government Code requires that cities prepare an annexation plan, and that this plan be posted on the city's website if it has one.

Business isn't merely a constituent of government, but is also a supplier of its goods and services. Business can deliver increased value to government in the

[1] A remarkable example of this is the City of Tyler's Annual Report for 2010 published as an e-book at: http://www.mydigitalpublication.com/publication/?i=63778

electronic marketplace. O'Leary reports that the publication of public procurement opportunities, a key enabler of e-Procurement, positively affects days in inventory and accounts receivable, and generally reduces costs (Shaw 2006, 43).

Conducts e-Procurement

Thai and Grimm report that e-Procurement offers government some distinct benefits: (1) it saves labor and materials; (2) it enhances competition by expanding the reach of public procurement; (3) it increases satisfaction by improving relations between government and its suppliers; (4) it increases government transparency by opening procurement records to vendors and the public; and (5) it facilitates the decentralization of procurement by allowing direct purchases from approved suppliers (Thai and Grimm 2000, 236).

Procurement of goods and services is one of local government's most important jobs (Potoski 2008, S58). When a market is functioning well, governments can assess the feasibility of contracting and avoid the high transaction costs of having to extensively research products and suppliers' behaviors. In its simplest form, e-procurement is buying on the Internet. Beyond that, Potoski highlights three enablers of more advanced e-procurement: (1) the presence of laws and regulations recognizing digital signatures; (2) allowing bidding over the Internet reducing costs to vendors; and (3) the use of reverse auctions over the Internet; all of these are effective in determining the prices buyers are willing to pay and the profit margins vendors will be satisfied to realize (Potoski 2008, S65).

The Electronic Signatures in Global and National Commerce Act ("E-Sign"), signed into law by President Clinton in 2000, made electronic contracts as binding as physical ones. The Virginia General Assembly passed the Uniform Electronic Transactions Act ("UETA") in the same year. Virginia's law was adopted by the National Conference of Commissioners on Uniform State Laws, and enacted by 47 more states, including Texas in 2005 (NCSL 2011). The E-Sign laws created nationwide opportunities for electronic authentication of financial transactions and digital signatures of contracts.

The Texas Comptroller of Public Accounts (CPA) assists local governments and state agencies with e-Procurement. Local governments can benefit from contracts through the Council on Competitive Government (CCG). The CCG contracts take on complex service delivery issues, ranging from processing of mail to print shop bidding to management of energy procurements and others. Local governments automatically satisfy competitive bidding requirements when participating in a CCG contract.

Over 200 state agencies and 1900 local governments participate in the Texas CPA Cooperative Purchasing (CO-OP) program, which allows them to meet their legal requirements for competitive bidding while offering volume purchasing power online. CO-OP membership is $100 annually. Local government members may use existing state contracts, post solicitations to the Electronic State Business Daily (ESBD), access to rental car/airline/travel contracts, the Centralized Master Bidders List (CMBL), and TxSmartBuy.com. They also may (voluntarily) post solicitations to the ESBD and participate in the Texas Multiple Award Schedule (TxMAS), an online catalog of goods and services maintained by the federal General Services Administgration.

Cities may use their web presence to advertise requests for bids or proposals, and to accept them. Texas law permits cities to "receive bids or proposals through electronic transmission, provided the city council adopts rules to ensure the identification, security and confidentiality of electronic bids or proposals and to ensure that the electronic bids or proposals remain effectively unopened until the proper time."[2] Receipt of proposals does not require a municipal website; these may be received using a city's digital presence – its email address, or presence in other electronic forums.

As envisioned by the Winters Commission in 1993, the trend of the New Public Management movement toward privatization accelerated the pace of local government procurement. Potoski observes, "Municipal governments have become less organizationally rigid, with more flexible labor contracts and procurement regulations." Governments may not yet be managing their supply chains electronically, but e-Procurement by government is, by many accounts, highly successful (Potoski 2008, 565), with multiple manifestations (Hardy and Williams 2008, 177). Given the right technological environment, even local suppliers and small city governments may realize mutual benefit from e-Commerce.

Three criteria are therefore proposed to describe the most elementary functions of e-Administration, the back-office functions supporting the provision of public services: 1) Has the government established a digital presence and a network? 2) Does the government publish public information electronically? and 3) Does the government take advantage of the economies of e-Procurement? So far, e-gov looks very much like a

[2] Texas Local Government Code, Title 8. Acquisition, Sale, or Lease of Property, Subtitle A. Municipal Acquisition, Sale, or Lease of Property, Chapter 252. Purchasing and Contracting Authority of Municipalities

Figure 2.

business, even if it is one owned by its customers. To complete the analogy to business, consider how the final category of the conceptual framework, e-Democracy, resembles the governance performed on behalf of the investors of public companies. That is to say, how does e-gov serve the shareholders of government (you and me)?

e-Democracy

Figure 2.2 USA.gov logo

E-Democracy includes the use of the internet and related technology to foster discourse among and between citizens and their elected and appointed public officials (White 2007, 110). However, many e-gov websites "reduce the citizen to a customer" and neglect the opportunity to enhance participation (Welch 2005, 376). The *National Performance Review* of 1993 warned against adopting a perspective of e-gov as merely the automation of government (Gore 1993):

> Information technology must not be applied haphazardly or sporadically. It also must not be used simply to automate existing practices. Instead, information technology must be seen as the essential infrastructure for the government of the 21st century--a modernized electronic government.

A consistent theme in the literature is that e-citizenship will have to be cultivated if e-Democracy is to take root (Asgarkhani 2005, 164) (Dawes 2008, S96). Coleman (Chen et al 2006, 14) suggests that e-citizenship adds an additional burden to government – the promotion of digital literacy (teaching citizens to locate information), managing the protocols for interaction, and regulation of software use. Welch (2005, 388) warns that the tendency of public managers to keep citizens at arm's length "may be good for the efficiency-minded customer, but bad for the democracy-minded citizen".

Coleman (2008, 12) notes that citizen feedback to e-gov is restricted by "the politics of information formatting", finding the "rhetoric of freedom to be overshadowed by an environment of circumscription".

The promise of e-Democracy is increased citizen participation in government. Macintosh suggests there are four e-participation functions: 1) providing access to factual information; 2) formulation of opinions based on others' views; 3) citizen contributions of their own opinions; and 4) citizen initiation of their own issues (Chen et al 2008, 93). These functions rest on responsive, transparent, open, and agile e-gov.

The literature does not reflect a broadly shared vision of future citizen participation through e-gov. There does seem to be agreement that, however great or small the potential of e-Democracy may be, it is a distinct component of electronic governance and one which has yet to be fully explored[3]. This is particularly true for local e-gov, which has lagged behind other levels of e-gov as a result of poor marketing to local public servants, privacy concerns, and affordability (Edmiston 2003, 27).

One explanation for resistance by public servants toward e-participation at the local level is the systems of rules in place in governments. Whereas rules for governance at the national level tend to be solution-guiding, those in place at the local level are more likely to be behavior-constraining (Gil-Garcia and Martinez-Moyano 2007, 272). Because local e-gov reforms are more likely to be top-driven than effected by citizen demand, they are relatively infrequent, a result of the incremental internet adoption tendencies of political leaders (Yun and Opheim 2010, 80). This cautious

[3] As noted by Chadwick (2011, 26), Coleman/Chen et al (2008, 15), and Dawes (2008, 592).

approach does not suggest that sweeping changes to e-Democracy are imminent in local e-gov. Dawes found it useful to replace the term “electronic government” with “electronic governance” to help convey the idea that the promotion of citizen participation in virtual communities should be central to its aims (Dawes 2008, 587).

West surveyed electronic governments in the US annually from 2000-2008. These surveys, cited by Wohlers (2010), Chadwick (2011), and Dawes (2008), among others, provide reliable indicators for the progress of electronic governments. Yun and Opheim (2010, 76) adopted five criteria of West for use in gauging the extent of e-Democracy in their examination of factors encouraging the diffusion of e-gov: 1) whether the website has direct email communication options; 2) whether it allows public comments; 3) whether it can provide regular notifications for information updates; 4) whether it allows website visitors to personalize their own way of site usage; and 5) whether it is accessible through personal electronic devices. These criteria for measuring the presence of e-Democracy are adopted for use in this research with one modification. It’s important to note that offering to communicate by email is not the same thing as being responsive to it; thus in this research the mere availability of email communication is used as a measurement of e-Services, not e-Democracy.

Responds to Communication

Government, including e-gov, has a moral duty to be responsive to communications of the governed, even digital communications. Coleman agrees, and notes: “There is a need for a political debate about digital interactivity and its consequences rather than a bureaucratic strategy to ‘manage’ the over-talkative public” (Chen et al 2008, 15). He finds that e-gov projects “often create implicit or intentional

obstacles to the political efficacy of ordinary people" (Chen et al 2008, 16). West tested responsiveness by emailing government offices with a simple question of what their official hours were (2004, 19).

The tension between public managers and constituents, elected officials and electors, can either be relieved or elevated by digital interaction. Scott (2006, 49) observed a European tendency to promote online dialogue between citizens and city administrators. He offered starkly contrasting US findings, noting there was "little evidence that US municipal government websites support significant public involvement" (Scott 2006, 349). One avenue to reduce this tension is the increase of transparency by making records available online.

Offers Transparency

> A popular Government, without popular information, or the means of acquiring it, is but a Prologue to a Farce or a Tragedy; or, perhaps, both. Knowledge will forever govern ignorance; And a people who mean to be their own Governors must arm themselves with the power which knowledge gives. (James Madison, 1799).

The Open Government Directive of December 8, 2009, forced two previously distinct spheres to be reconciled, that of e-Democracy in the political sphere and e-Government in the administrative sphere (Harrison et al, 2011, 3). Open government's imperatives of transparency, participation, and collaboration "bear promise of ultimately improving policy performance – the historic focus of government – by creating shared understandings of current performance and generating pressure to improve" (Harrison et al 2011, 7). Transparency can also be instrumental in addressing a government's problem of legitimacy (Harrison et al 2011, 4).

The International City/County Management Association (ICMA) supports local governments' efforts toward more open and transparent government. ICMA endorses the approach of Sunshine Review, a non-profit organization that is dedicated to state and local government transparency. Sunshine Review collects and shares transparency information, employing a wiki and the use of a "10-point Transparency Checklist" to evaluate the content of state and local government websites.[4] The expected transparency content includes information about the city's budget, meeting agendas and minutes, contact information for elected and appointed officials, audits, contracts, lobbying agreements, and accessibility of public records. Minutes should be posted after approval. Agendas should be posted within the required notice period for the meeting. Sunshine Review maintains a growing list of US cities' grades for transparency.

The Texas Comptroller of Public Accounts (CPA) has established basic criteria for online financial transparency as part of the Leadership Circle Award program for state agencies and local governments (Texas CPA 2011). The Leadership Circle Award, begun in 2010, includes nearly all of the criteria for transparency found in Sunshine Review's checklist. The program's "major criteria" for transparency include website posting of (1) the adopted budget, (2) the annual financial report for the fiscal year that ended less than 12 months ago, (3) the city's check/expense register, and (4) a financial transparency page providing access to (1) through (3). Minor criteria include contact information or city officials, posted procedures for public information requests, and more detailed financial data, to include current tax rates. A complete set of the

[4] Sunshine Review's City Checklist may be found at: http://sunshinereview.org/index.php/City_websites

criteria is found at Appendix 3. Cities may nominate their websites for varying levels of recognition, and check the status of others on the CPA website.[5] Every municipality, even smaller ones, can strive for the Texas CPA transparency goals, with or without a website.

Another transparency tool used by many Texas cities to energize citizen participation is to provide streaming content of public meetings (Goldberg 2009, 66). These are normally the open portion of public meetings and hearings involving elected or appointed officials. Because streaming video allows the public access to the complete content of a meeting, rather than a condensed version, the Texas Public Information Act and amendments allows these recordings to substitute for written minutes of proceedings. Due to the large file sizes, this is more practical for broadband than dial-up internet subscribers. An inexpensive and relatively unsophisticated goal to strive for is providing live video coverage of meetings in real time (Goldberg 2009, 66).

Provides Citizen Forum

"Social media technologies, and their increasing integration into government and community affairs, can be a significant change agent in shaping future democratic models" (Bertot 2011, 5). Social media can dramatically alter how the public and government interact, lengthen the period of public input, and make visible significant opposition minorities (Bertot 2011, 6). A disadvantage to offering this type of forum, however, is that Information on a city's social media Web site (Facebook, Twitter, LinkedIn, etc.) must be retained in accordance with the applicable records retention

[5] Transparency by Texas Cities may be found at: http://www.texastransparency.org/local/cities.php

schedules. Also, cities must take care to comply with the Texas Open Meetings Act as interaction between elected officials in its group could result in a violation.

The Pew Internet and American Life Project found that “Minority Americans are significantly more likely than whites to agree strongly with the statement that government outreach using tools such as blogs, social networking sites or text messaging ‘helps people be more informed about what the government is doing’ and ‘makes government agencies and officials more accessible’ (Smith 2010, 6).

Macintosh asserts the primary functions of e-participation are accessing factual information, formulating opinions based on others’ views, contributing one’s own opinion, and initiating one’s own issue (Chen et al 2008, 93). Coleman suggests further research is necessary into how e-gov can provide for a social space (a commons), avoiding the temptations to manipulate citizens and deflect democratic energy (Chen et al 2008, 17).

Chadwick (2011) investigated one citizen engagement case study (TechCounty) in which a citizen online forum sat “squarely within a converged model of e-government and e-democracy”, where citizen opinion was “integrated into service design and delivery”. He observed the ambivalence of elected officials and anxiety of legal counsel about liability that played a “subtle but important role” in the forum’s failure. He concluded that institutional influences had undermined the initiative: budget constraints, general organizational instability, internal policy shifts, political ambivalence, perception of legal risk, and tensions that were introduced by outsourcing (Chadwick 2011, 34-35).

Whether small towns perceive the internet as a boon, barrier or tool to be used sparingly, its potential to engage and empower citizens is profound. Customizing the experience of e-gov users acknowledges their roles as stakeholders in government.

Customizes Experience

The personalization of experience factor allows constituents to consistently navigate to locate content by self-identifying with a group (e.g. businesses or residents) or purpose of use (e.g. development or information). This aid to navigation is accomplished by organizing content to user-defined or user-oriented displays. Focus groups and other feedback indicate that citizens don't know -nor do they want to learn - how the government is organized or how it functions in order to get the information and services they want. Creating navigation according to organizational structure or function is not the best way to design a website for citizens (HowTo.Gov 2011).

HowTo.gov is a standard for e-gov excellence, managed by GSA's Office of Citizen Services and Innovative Technologies and the Federal Web Managers Council. It offers best practices for public web content and social media on its website: http://www.howto.gov/. Best practices suggest offering active rather than passive means of communicating new information to interested subscribers. The registration of users is another means of personalizing the experience. HowTo.gov offers guidelines for governments to analyze their audience and content to create the optimal experience, defining audience analysis as "figuring out who uses—or should use— your website, what information they need, and which tasks they must complete."[6]

[6] http://www.usa.gov/webcontent/usability/audience-analysis.shtml, Retrieved 11 August 2011

One means of offering tailored information is Really Simple Syndication (RSS). RSS feature the transmission of data in the XML file format that results in the display of new website postings without the need to actually visit the site.[7] A citizen can receive news from any RSS-enabled Web site by subscribing to their RSS feed. This technique saves users from having to repeatedly visit favorite websites to check for new content or be notified of updates via email. Instead, article summaries are delivered directly to them. They can choose to visit the websites when the RSS feeds contain summaries that are relevant. This procedure is used by the federal Regulations.gov web service to allow the monitoring the websites of rulemaking agencies, allowing new content to be automatically routed to subscribers.[8]

Another means of personalizing the user experience is to allow users to sign up for automatic notification of changes to topics of interest using an automated email address list or "listserv". This adds users to a distribution list for updates to specific content or on a specific subject, such as a zoning change under consideration. This procedure is in federal and state rulemaking to allow parties interested in emerging rules to offer comments and review those of others. The technique saves users from having to repeatedly visit favorite websites to check for updated content of interest, new content or be notified of updates via email. Instead, article summaries are delivered directly to them. A recent study of Texas cities' websites of populations between 50,000 and 125,000 indicated there was negligible use of listserv (Goldberg 2009, 48).

[7] WebContent.Gov has a useful description of RSS, Retrieved 31 October 2011 at: http://prod.usa.gov/webcontent/technology/rss.shtml

[8] Anyone can choose which federal agencies to follow and subscribe to them at http://www.regulations.gov/#!rss;letter=A Retrieved 11 August 2011

Summary of Conceptual Framework

The conceptual framework for this research is descriptive categories, the most basic micro-conceptual framework to see or use (Shields and Tajalli 2006, 323). Description is a useful research purpose when the literature on a subject is incomplete, or the subject is rapidly evolving. The literature suggests that the categories selected for this research continue to evolve. With less than two decades of literature covering e-gov in the library, new ICTs continue to emerge that offer alternatives for communications, resource planning, and enterprise management.

The categories for analysis that emerged as most suitable to research were those corresponding to the functional rather than the evolutionary characteristics of e-gov. The category of e-Services reflects the role of local government as a distributor of public value to its constituents downstream in the value chain: citizens and businesses; this is comparable to the operations and front-office functions in business. The category of e-Administration describes the role of local government in fulfilling the organizational mission, such as acquiring the necessary goods and services to create public value. That role is comparable to the corporate back-office working with the upstream suppliers in the value chain. Lastly, the category of e-Democracy refers to e-gov's role in supporting the shareholder and board of directors, one charged with facilitating the process of governance by the governed.

Chapter Summary

In her redefinition of e-gov in 2008, Dawes captured its essence: "Electronic governance comprises the use of information and communication technologies (ICTs) to support public services, government administration, democratic processes, and

relationships among citizens, civil society, the private sector, and the state" (Dawes 2008, 586). Models of e-gov adoption follow along either organizational evolution (Layne and Lee 2001) or technological adaptation (Hiller and Belanger 2001). West offers a synthesis of both approaches in his model of the stages of e-gov transformation. Evolution of e-gov is not steady. As governments "reach the top of a maturity stage, they hit a plateau", thus "moving to a higher stage requires restructuring of their e-government strategies" (Panayiotou et al 2007, 214).

Virtual identify and digital activity has changed how citizens and businesses conduct their affairs. Public administrators must be cognizant of how e-gov is used to provide services, produce services, and conduct a dialogue with their constituents. Continuing changes in ICT will challenge governments to cultivate e-Citizenship, to model e-Governance, and to overcome the barriers to e-gov access.

In the future, small cities must exploit e-gov not merely to satisfy their citizens' expectations, but to compete in the dynamic marketplace – of place. ICT offers great public value in producing a competitive environment that will attract and retain citizens and business.

> "As technology ceases to be seen as something apart from the normal processes of governance, it is likely that 'e-governance' will fade as a term of art. However a steady stream of questions regarding the nature and impact of ICTs on public services, government administration, democratic processes and the relationship among citizens, civil society, the private sector, and the state is likely to remain" (Dawes 2008, 597).

CHAPTER 3: Methodology

This chapter discusses the research methodology used to describe the levels of electronic government (e-gov) functionality in small Texas cities. E-government functionality follows the core functions of government including: (1) the provision of government goods and services, (2) the production of government goods and services (including procurement and contracting), and (3) the process of governance (Panayiotou 2007).

This research will examine the use of electronic means in local governments' provision of goods and services (e-Services), arrangement for the acquisition of those goods and services in the marketplace (e-Administration), and the process of participative and transparent governance (e-Democracy). This research project was determined to be exempt from full or expedited review by the Texas State Institutional Review Board, IRB Exemption Request EXP2011J3587.

Research Method

The research method used in this study is content analysis of websites, supplemented by survey data. Content analysis is the study of recorded human communications (Babbie 2007, 333). Content analysis and survey research are used to operationalize the conceptual framework (see Table 3.2).

A key advantage to content analysis is the economy in time and money it affords, allowing larger populations to be examined. Other advantages are the quick correction of errors, independence from subject response, and its unobtrusive nature (Babbie 2007, 344). There are also disadvantages to content analysis. Data must be recorded

and interpreted consistently for the measure to be valid and reliable (source). On the balance, the concreteness of content analysis strengthens the likelihood of reliability (Babbie 2007, 344) compared to other methods.

In addition to content analysis of websites, this study uses survey research. Survey research is necessary in this study because human responsiveness within e-gov functionality cannot be captured by visual inspection and coding of websites. Some advantages to survey research are that it makes large samples feasible and can help to standardize the formulation of concepts. Disadvantages of using surveys include their inflexibility and the appearance of superficiality in addressing complex topics (Babbie 2007, 287). Survey research is generally weak on validity, but strong on reliability (Babbie 2007, 288).

Data and Method

The unit of analysis in this study is a city's information network – i.e. its electronic infrastructure. This infrastructure includes "all information and communication technologies, from fax machines to wireless palm pilots, to facilitate the daily administration of government" (UN and ASPA 2001, 1). As noted above, content analysis of website and surveys of responsible administrators is necessary to collect data for each city.

All 36 cities of the (Texas) Capital Area Council of Governments that have a population between 500 and 5000 are included in the analysis. The average population of this group was 1,844. These cities and their corresponding websites are reported in Table 3.1. All of the cities in this region were selected rather than a random sample across the state in order to test the degree of e-gov isomorphism that may be

attributable to location and habitual association, while holding constant other factors such as institutional influence, and the varying influences of county and higher level governments. The boundaries of the Capital Area Council of Governments (CAPCOG) are unique among Texas COGs in that they include the state capitol and the offices of the Texas Municipal League. This area is home to twenty percent of the Texas schools of public affairs and administration which are accredited by the National Association of Schools of Public Affairs and Administration. Analysis of the CAPCOG area allows a statistically representative analysis of a politically and economically diverse region. By analyzing the entire study population within this area, patterns in e-gov adoption by neighboring small cities may be detected, without introducing the error inherent to sampling.

The simple survey sent was an e-mail to the office or individual identified as the recipient of general communications, with embedded requests for system delivery and "message read" receipts. If no office or individual was identified on a city's website, the first message was routed to the City Secretary. If no receipt or response was received with 72 hours, the next message was routed to the City Administrator or Manager. The subsequent addresses used to contact the city was the address provided for the mayor, and the agent that registered the city's website.

The message asked the respondent to confirm the presence and address of the municipal website. In three cases where the responsible administrator's email address could not be found on the website itself, the city had a means of sending a message using an online form which generated intranet mail. If the city did not have a website, the city was initially contacted by facsimile and by the email address on file with the

Capital Area Council of Governments. The timeliness and substance of the city's response was itself a criterion measure and subject of analysis.

Table 3.1 Study Population

	Census 2000	Census 2010	Numeric Change	Official Website
Bee Cave	656	3,925	3,269	http://portal.beecavetexas.com/
Bertram	1,122	1,353	231	None
Blanco	1,505	1,739	234	http://www.cityofblanco.com/
Briarcliff	895	1,438	543	None
Cottonwood Shores	877	1,123	246	http://www.cottonwoodshores.org/
Dripping Springs	1,548	1,788	240	http://www.cityofdrippingsprings.com/
Flatonia	1,377	1,383	6	http://www.ci.flatonia.tx.us/
Florence	1,054	1,136	82	http://www.florencetex.com/
Giddings	5,105	4,881	-224	http://www.giddings.net/
Granger	1,299	1,419	120	http://www.cityofgranger.org/
Granite Shoals	2,040	4,910	2,870	http://www.graniteshoals.org/
Jarrell	*	984	*	http://www.cityofjarrell.com/
Johnson City	1,191	1,656	465	http://www.cityofjohnsoncity.info/index.jsp
Jonestown	1,681	1,834	153	http://www.jonestown.org/
La Grange	4,478	4,641	163	http://www.cityoflg.com/
Lexington	1,178	1,177	-1	None
Liberty Hill	1,409	967	-442	http://www.ci.liberty-hill.tx.us/
Llano	3,325	3,232	-93	http://www.cityofllano.com/
Martindale	953	1,116	163	None
Meadowlakes	1,293	1,777	484	http://www.meadowlakestexas.org/home/
Mountain City	671	648	-23	http://www.mountaincitytx.com/
Mustang Ridge	785	861	76	None
Niederwald	584	565	-19	http://www.niederwaldtx.com/
Point Venture	*	800	*	http://vopv.org/
Rollingwood	1,403	1,412	9	http://www.cityofrollingwood.com/
Schulenburg	2,699	2,852	153	http://www.ci.schulenburg.tx.us/
Smithville	3,901	3,817	-84	http://www.ci.smithville.tx.us/
Sunrise Beach Village	704	713	9	http://cityofsunrisebeach.org
Sunset Valley	365	749	384	http://www.sunsetvalley.org/
The Hills	1,492	2,472	980	http://www.villageofthehills.org/
Thrall	710	839	129	None
Uhland	386	1,014	628	http://www.cityofuhland.com/
Volente	*	520	*	http://villageofvolente-tx.gov/
West Lake Hills	3,116	3,063	-53	http://www.westlakehills.org/
Wimberley	*	2,626	*	http://www.cityofwimberley.com/
Woodcreek	1,274	1,457	183	http://www.cityofwoodcreek.com/
Source: U.S. Census Bureau				
http://www.census.gov/				

Human Subjects

In some cases cities have identified email contact information using addresses that are uniquely associated with human subjects. These persons were requested to reply to the researcher to verify the city's official website. A secondary purpose was to assess municipal responsiveness. No personally identifying information was requested or collected. The use of this procedure was specifically articulated in the approved IRB exemption request, approval number EXP2011J3587.

Variables

Tables 3.2-3.4 operationalize each of the descriptive categories. Ten categories were developed, with a total of 32 possible criterion measurements. One category (e-Procurement) was examined in part by content analysis of the Texas Comptroller of Public Accounts website, and two others (Establishes electronic identity/network and Responds to Communication) were examined via content analysis of city websites as well as survey research.

Table 3.2: Operationalization of the Conceptual Framework: **E-Services**

Descriptive Category	*Measures*
Accepts electronic requests	1. Does the city accept electronic reports and requests from constituents? 2. Can requests for public information be made online or by email? 3. Does the city offer to satisfy information requests by electronic means?
Initiates transactions	4. Does the city website offer forms online? 5. Can any online forms be completed online? 6. Do some online forms have to be downloaded, printed and either mailed or faxed?

Table 3.2: Operationalization of the Conceptual Framework: **E-Services**	
Descriptive Category	*Measures*
Accepts electronic payment	7. Does the city website permit electronic payment for any fee or tax? 8. Does the city accept credit card (and offline debit card) payment? 9. Does the city accept online debit card payment? 10. Does the city accept electronic funds transfer through the ACH?

Table 3.3: Operationalization of the Conceptual Framework: **E-Administration**	
Descriptive Category	*Measures*
Establishes electronic identity and network	11. Does the city claim an official website? 12. Is the city website situated in a public domain (.gov or .us)? 13. Does the city website provide at least one email address for general communications? 14. If the city does not have a website, does it have an email address for use in general communications?
Publishes electronically	15. If the city has a website, does it post: Notices of Open Meetings, Adopted Budget, Annexation Plans, Notices of Annexation Hearings, Notices of Property Tax Hearings, and Conflicts Disclosure forms? 16. Does the city have any completed Conflict Disclosure forms posted on its website?
Conducts e-Procurement	17. Does the city participate in the Texas Comptroller CO-OP program (volume procurement allowing use of TxMAS and TxSmartBuy.com)? 18. If the city participates in CO-OP, has it used the Electronic States Business Daily? 19. Does the city website contain any electronic solicitations for bids?

Table 3.4: Operationalization of the Conceptual Framework: **E-Democracy**	
Descriptive Category	*Measures*
Responds to communication	20. Did the city acknowledge receipt of the research introduction email? 21. Did the city respond to the research introduction email and verify its official website and/or email address, if any?
Provides Transparency	22. Does the city have a financial reports web page containing budget and audit information? 23. Does the city display its annual financial report online? 24. Does the city display a Check/Expense register online? 25. Does the city website contain contact information (telephone or email) for elected officials?
Provides citizen forum	26. Does the city website provide audio or audiovisual streaming content of meetings? 27. Does the city website advertise an "official" presence on any social media site?
Provides personalization of experience	28. Does the website allow officially monitored citizen exchanges with the city and one another? 29. Does the city website allow the user to customize the view? 30. Does the city website offer Really Simple Syndication notification of newsfeed or content changes? 31. Does the city website offer a "listserv" or other means of constituent registration for notification of new content in regard to a specific issue? 32. Is the city's website tailorable to optimize viewing from a mobile platform?

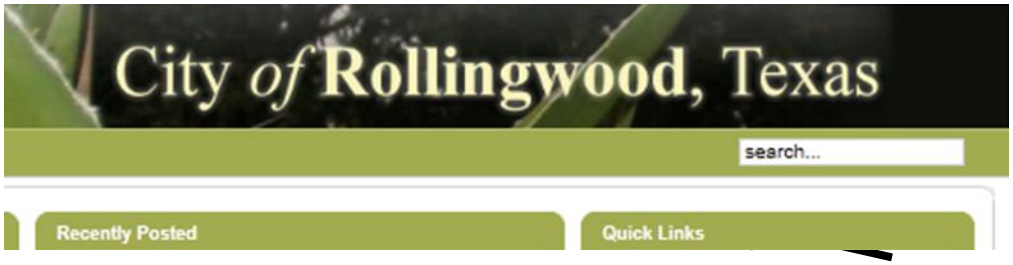
Coding Scheme and Evaluation Criteria

The content analysis coding scheme and evaluation criteria are identified in Appendix 1. Each city's electronic government was reviewed using the 32 criteria measures developed from the conceptual framework descriptive category criteria (Table

3.1). Two of these measures were collected using a test email to the cities to gauge municipal responsiveness to external communication while obtaining verification of the official website address. One category, "Conducts e-Procurement", was measured in part using two sources of data obtained from the Texas Comptroller of Public Accounts Windows on State Government website: (http://www.window.state.tx.us/procurement/prog/coop/coopmemb/). The final 28 were coded based on content analysis of the city's website content.

The content analysis of web pages was facilitated by the use of the "find" feature in Internet Explorer 9.0. Each website home page was searched for the content strings indicating the presence or absence of data for variables of the descriptive categories, as specified in Appendix 2. Each match obtained was examined for applicability. If the measurement procedure in Appendix 2 specified to search the "first tier", then each web page that was hyperlinked to the home page was also examined for the specified term. If the website home page featured a site search feature, such as at figure 3.1, that feature was used to search the entire website. The date and time the website was examined was recorded to isolate the instance of website configuration.

Figure 3.1



There were only four possible states for each datum recorded at Appendix 2: 0= No, 1 = Yes, 2= Not Applicable, and 3= Unable to Determine. Results will be

presented as percentages of the applicable total, whether the percent of the study population (n) or a subset thereof (e.g. cities with websites). The formulas for determining percentages may be found at Appendix 7. It is important to bear in mind that the absence of an observation does not prove the absence of a phenomenon, merely that the means prescribed to observe it was not sufficient to detect it.

E-Government Descriptive Categories

Accepts Requests

If a city accepts electronic requests, it is an indication that it facilitates e-Services, i.e. it has incorporated the use of ICT into its business processes through e-filing (Reitz 2006, 734). The ability to accept requests is most commonly demonstrated by offering an email address for a constituent to communicate with the city or by providing an online format to capture constituent requests or reports. In order to determine if the city accepts electronic request, the investigator coded the website based on the following criteria. If there was an observable email address or online form to capture communication from users on either the website homepage or within the first menu tier the city website was coded 1, otherwise it was coded 0.

The variable of accepting requests for public information (open records) is a special case. Under the Texas Public Information Act, cities are obliged to provide records not exempt from disclosure to any citizen that requests them in writing, email or fax. However, cities may designate a person to receive these requests, and are not obliged to respond to requests for public information sent to any other person (Attorney

General of Texas 2010, 3). If there was an observable notice on the website that it would accept emailed requests for open records on the home page, request form, or any searched page containing the phrase “public information” or “open records”, the element was coded 1; otherwise it was coded 0.

Cities may satisfy requests for public information with electronic data if that is desired by or acceptable to the requestor (Attorney General of Texas 2010, 11). If the website advertised on the home page, request form, or any searched page containing the phrase “public information” or “open records” that it offered the service of fulfilling these requests electronically, the element was coded 1; otherwise it was coded zero.

Facilitates Transactions

The ability to obtain forms electronically without the need to travel to an official place of business is an indication of the most basic level of e-gov (Layne and Lee 2001, 124). A form serves as the city’s offer to transact with its constituents (Reitz 2006, 735). If the city website contained a forms web page, or if any form was detected by a search of the home page or the first tier of menus, or in a search of the website for the terms “forms” or “requests”, this variable was coded 1, otherwise it was coded 0.

The ability to process forms online indicates the presence of two-way communication and an advanced stage (Transaction) of e-gov maturity (Hiller and Belanger 2001, 15). If the city website contained a link to any form that could be processed online from the home page, the “forms page”, or the first tier it was coded 1; otherwise it was coded 0.

Downloading and mailing forms is indicative of a basic stage (Partial Service Delivery) of e-gov maturity (West 2004, 17). Scanning technology allows the electronic transmission of documents traditionally routed by mail. If any forms on a city website did not indicate a fax number or email address to file the completed form package with, this item was coded as 1; otherwise it was coded 0.

Accepts Electronic Payment

Accepting payments for fees and taxes electronically is a valuable e-Service to constituents and another sign of advancement of a city's e-gov from the initial stage to the Transaction stage (Reddick 2004, 61). A bank or other financial service, such as PayPal, can provide for the electronic transfer of payment to a city. A search was made of the home page, first and second tier menus, and the entire site for the terms: "services", "online payment", and electronic funds transfer". If a match for the search on the city website described a means to accept payment electronically it was coded 1; otherwise it was coded 0. These cities were further evaluated to note the means of payments available (1) or not (2) through credit card, debit card, and electronic funds transfer.

Establishes Electronic Identify and Network

E-gov begins with a digital presence on the world wide web (Layne and Lee 2001,126). Using the Google search engine ("City of ____") and the website links of the counties concerned, a list of the most likely websites of the study population was drawn. If the website conveyed that it was the "official" website of the "City of ____", this variable was marked as "1". Each city was addressed in email correspondence. If an

authentic email from the city denied the site to be its official site, this variable was marked as 0, and if it confirmed the site this was marked 1. Otherwise this variable was coded with a 3. If there was no confirmed email address available for the city, or the city declined to respond to the research introduction message, the chamber of commerce and the registering address for the most likely website were contacted to confirm the site authenticity. No telephone calls or mailed letters were used to confirm an official website presence, only the absence of one.

Registration within a known government domain generates public trust and citizen confidence in the knowledge that they are using an official Texas government website (DIR 2010). If the city's official website ended in .tx.us or the .gov, it was located in a government domain and was coded as 1; otherwise it was coded as 0.

A stage beyond the "bulletin board", or initial stage, of municipal electronic government will include such capabilities as expanded telecommunications access (Reddick 2004, 74). Accordingly, a city that published an email address on its website was coded as 1 for telecommunications; otherwise it was coded 0 or 2. A city without a website that published an email address on its county or CAPCOG directory was coded as 1; otherwise it was coded as 0.

Publishes Electronically

At a minimum, all cities in Texas, regardless of size, are required to publish: (a) Notices of Meetings; (b) Budget; (c) Annexation Plan; (d) Notices of Annexation Hearings; (e) Conflicts Disclosure statements by public officials; and (f) Notices of Tax Hearings (Texas Municipal League 2011). If the city has a website, it must publish

these records and notices on it. This variable was only coded for cities claiming websites. The terms (Notice, Agenda, Budget, Annexation, Disclosure, Form CIS) were searched on the home page, the first tier of menus, and the entire site (if a tool was provided). Any matches were evaluated for applicability. The presence of the last or next City Council meeting agenda on the website resulted in a coding of 1; otherwise it was coded 0. The presence of the budget for the city's current fiscal year (2011-2012 for most) was coded 1; its absence was coded 0. Presence of an Annexation Plan was coded as 1, absence as 0. If a city budget reflected a tax rate increase in its budget but no posted notice of a tax hearing seven days in advance, it was coded 3 (unable to determine); otherwise it was coded as 1 (present) or 2 (none). The same method was used to code the publication of annexation hearings 10- 20 days in advance.

Posting information beyond the legal requirements is an indication of maturity within the initial "Information" stage of e-gov (Wohlers 2010, 94). The home page and first tier menu was searched, and the entire site as well (if enabled) for other records or notices beyond the legal minimum. Observed presence of any was coded 1, absence of observation resulted in a 0.

Conducts e-Procurement

The procurement of goods and services is one of local governments' most important jobs (Potoski 2008, S58). Using e-Procurement, cities can enjoy the same efficiencies and savings that they strive to provide their constituents. One way to do this is through the Texas CPA CO-OP program. Cities that were members of CO-OP were coded as 1, otherwise they were coded 0.

Members of the Texas CO-OP program are eligible to use the Electronic State Business Daily to post solicitations. Members that have recent activity listed as attested by their listing on the ESBD were coded 1, other members were coded 0, and non-members were coded 2.

The cost of online transactions is about 65% less than that for traditional "over the counter" transactions (Rudolphy and Culleson 2002, 46). Cities can advertise and accept responses to Requests for Proposals or Requests for Bids on their websites. Cities with websites that had evidence of either of these through a search of the home page, first tier of menus and entire site (if enabled) were coded 1, otherwise they were coded 0.

Responds to Communication

Cities should respond to communication. Every reasonable effort was made to identify an email address that was serving or could serve as a conduit to the city. The method of assessing responsiveness employed West's routine inquiry (West 2004, 19). In this case, instead of asking for hours of operation, the city was asked to confirm its official web address. An email with the subject of "Research Introduction and Request" was first sent to any email address identified on the city's website that was indicated as the principal one to use for inquiries, such as info@(website domain). "Delivery" and "Read" receipts were requested from every attempt to communicate to public offices. If there was no response within 72 hours, and attempt was made to contact the City Secretary. If there was no response with 72 hours, an attempt was made to contact the City Administrator. If there was no response within 72 hours, an attempt was made to

contact the Mayor. If no response from the Mayor, an attempt was made to simultaneously confirm a city web presence and email capability with the local chamber of commerce, and to request this information from the registering address on file with the Internet Corporation for Assigned Names and Numbers. Cities that responded after any of these prompts were coded as 1 for acknowledgement of receipt; otherwise they were coded as 0. The date and time of receipt of either the delivery receipt or a city's reply was recorded for future evaluation.

Coleman finds that e-gov projects "often create implicit or intentional obstacles to the political efficacy of ordinary people (Chen et al 2008, 16). Cities may reduce these obstacles by responsiveness in communication. Cities that responded to the email inquiry seeking to determine the authenticity of their website by confirming its presence (or absence) or by supplying the correct address were coded as 1; otherwise they were coded as 0. The date and time a responsive reply was received was recorded for future evaluation.

Offers Transparency

In 2010, the Texas Comptroller of Public Accounts (CPA) established criteria for online financial transparency as part of its Leadership Circle Award program for state agencies and local governments (Texas CPA 2011). The city website home page, first tier of menus, and entire site (if enabled) were searched for the terms "Financial", "Budget", "AFR", and "Check Register". If a designated web page for Financial records and reports contained any two of the CPA's three major documents (Budget, AFR, Check Register), it was coded as a 1 for Financial Transparency; otherwise it was

coded as a 0. Discovery of any of the three major documents resulted in coding of a 1 for that document; otherwise it was recorded as a 0.

Both Texas Transparency (Texas CPA 2011) and Sunshine Review recommend a city website contain contact information for elected and appointed officials. This may be done by email addresses, or telephone numbers, or intranet communications. If a city had contact information or intranet contact means for its Mayor and Council members, it was coded as 1; otherwise it was coded as 0.

While not required by Texas law, Sunshine Review recommends the inclusion of public meeting agendas and minutes. A search of the home page, and first tier of menus was conducted to locate “Agendas” and “Minutes”, and extended to the entire site if it had a search tool. If a city had the most recent City Council meeting minutes and the latest agenda it was coded 1; otherwise it was coded 0.

Provides Citizen Forum

Social media can dramatically alter how the public and government interact, lengthen the period of public input, and make visible significant opposition minorities (Bertot 2011, 6). City website home pages were examined for the presence of social media logos, and the home pages were searched for common social media titles: “Facebook”, “Twitter”, “LinkedIn”, and “YouTube”. If any matches were found the city was coded 1; otherwise it was coded 0.

Another means of providing a social commons is a web log, or blog, on the city website. Coleman suggests research into how e-gov can provide for a social space (a commons), avoiding the temptations to manipulate citizens and deflect democratic

energy (Chen et al 2008, 17). City website home pages and first tier menus were searched for evidence of a citizen forum using the terms “forum”, “opinion”, and “letters”; the entire site was searched if it had a search tool. Any matches discovered were examined for applicability. An actual forum resulted in a coding of 1; otherwise coded 0, or 3 in the case of websites with citizen login features which seemed to invite citizen input.

Provides Personalization of Experience

The personalization of experience factor allows constituents to navigate to content consistently by identifying with a group (e.g. businesses or residents) or purpose of use (recreation or public information) (HowTo.Gov 2011). A search was performed of the home page for choice of different view or content for groups such as constituents (citizens and businesses) and external parties (other political subdivisions and visitors), or use such as “Public Information” and “Development”. Home pages meeting these criteria were coded 1; otherwise they were coded 0.

Best practices suggest offering active rather than passive means of communicating new information to interested subscribers (HowTo.Gov 2011). City website home pages were visually examined for the presence of the Really Simple Syndication logo and topical newsletter subscriptions. If either condition existed city websites were coded 1; otherwise they were coded 0.

Another means of providing tailored information is the use of the “listserv” distribution group or a newsletter distribution group, both of which can be used to register for all future releases of information on a specific topic. City website home

pages and first tier menus were searched using the terms “listserv”, “newsletter”, and “notification”. Matches were examined for applicability. A city website was coded 1 if it offered listserv or tailored newsletter features; otherwise it was coded 0.

Reliability Estimation

Whenever human judgment is used as part of a measurement procedure the reliability or consistency of the result may be diminished (Web Center for Social Research Methods year). A single researcher might become distracted and misinterpret an observation in the performance of a lengthy, repetitive task. In this study, an inter-coder reliability method is used to provide a check on the content coding consistency of the primary researcher. An independent evaluator performed a sample coding of five city websites, using the same coding worksheet as the primary researcher. The percent of agreement was 91%.

Conclusion

This chapter has presented the methodology of this research, content analysis augmented by public information and a simple survey, both based on descriptive categories of the electronic infrastructure of 36 smaller Central Texas municipalities. The next chapter presents the results of the research, describing trends and patterns of e-gov functionality in these cities.

CHAPTER 4: Results

Introduction

The purpose of this chapter is to report and interpret the data compiled from the coding utilizing descriptive categories developed from the conceptual framework. The research project evaluated a total of 36 small cities' use of ICT, with 32 possible variables describing a total of ten categories. The data are presented in tabular format, using percentages to describe the tendencies implied by the research observations. The absence of an observation does not prove the absence of a phenomenon. A brief summary is provided for each descriptive category's findings.

e-Services

Accepts Electronic Requests

This category relates to the degree to which one-way communication is facilitated by the city. One-way communication, while not a particularly advanced e-government functionality, is still important because it is a way for citizens to contact government in a convenient and economical manner. A remarkable result was the determination that one hundred percent of the cities could accept reports and requests from their constituents via email.

Another important and simple request is related to open records requests. Cities can facilitate open records requests by explaining how to make an open records request on their website. In this sense, explaining how to make an open-records request electronically enhances the city's responsiveness and citizens' ability to exercise their right to obtain open records with an electronic request. This increases citizens'

perceptions of local democracy. Thirty-three percent of the cities specifically identified procedures on websites for electronically requesting open records under the Texas Public Information Act.

The offer of electronic fulfillment of open records requests was observed in the websites of seventeen percent of the cities (See Table 4.1).

Table 4.1	***Accepts electronic requests***	Percent
	Cities that can accept electronic requests or reports from constituents	100.0%
	Cities with websites inviting electronic requests for open records under the Public Information Act	33.3%
	Cities who had websites offering to satisfy open records requests with electronic data if desired by the requestor	16.7%

Based on this study, most small cities were not positively disposed to invite the electronic submission of open records requests. Even less are disposed to fulfill these requests electronically. The majority still desire constituents to request and receive open records in writing or by fax. Few small cities have designated a specific person or office for routing email inquiries and requests would probably be addressed by the city manager or administrator. Cities benefit from identifying an email point of contact for open records requests, because failing to do so generally confers open records request status to any email request to any city email address (Attorney General 2010, 3). This can cause the city to fall behind in its duty to respond within 10 days and impart unnecessary urgency to otherwise routine tasks.

Facilitates Transactions

One of the major benefits of e-government is that it facilitates transactions. This function helps residents as well as the government because it reduces the time from request to delivery of services and in the process increases citizen trust in government (Welch et al 2004, 378). The movement from a partial service delivery stage (receiving a request via email) to the transaction stage (accepting completed forms online) reflects a growth in e-gov maturity from the initial "Billboard" stage to the "Transaction" stage. Table 4.2 presents the percentage of small cities that use e-government to facilitate transactions.

Seventy-two percent of small cities in this study provide online forms that allow citizens and businesses to initiate transactions with a form that can be printed or saved and emailed, faxed, or mailed. An on-line form is different from an email request because it constitutes a city's tender of an offer and the identification of the consideration that will be expected if accepted (Reitz 2006, 737). A form marks the initiation of a transaction by a city, as opposed to a request that is initiated by a constituent.

While a clear majority of small cities allow provide printable forms, only fifteen percent of the city websites provided forms that could be completed and submitted online.

Every website that featured online forms generally required them to be mailed or faxed when it completed. No website allowed the electronic submission of documents using portable document formats or portable network graphics.

Table 4.2	***Facilitates transactions***	Percent
	Cities with forms online	72.2%
	Cities with forms that can be completed online	15.4%
	Of cities with forms online, those with forms that must be mailed or faxed	100.0%

That merely 28 percent of small cities had no forms online or no website is noteworthy when contrasted with Wohler's content analysis of 2006-2007. In those findings, only 37 percent of cities between 1001-2000 populations had websites, and only 75 percent of cities between 2001-6000 had websites (Wohlers 2010, 94). A more recent survey of cities over 10,000 population reveals that only 12 percent of them have no forms online (ICMA 2011, 3). More remarkable was the 84 percent of small cities with websites that had forms which could be completed online. In comparison, of cities over 10,000, only 57 percent have online requests for services, 50 percent have online requests for open records, and 48 percent offer online registration for facilities and activities (ICMA 2011, 3).

Accepts Electronic Payment

Accepting electronic payments is a more advanced form of e-service because it allow a city's tender of offer for services to be accepted and consideration (payment) rendered. Obviously, it requires more a more technologically advanced platform. Whether for one-time purchases, or recurring payments, e-payment is common in the private sector and more residents are expecting this functionality from government (source). Table 4.3 reports the percent of small cities that accept and complete payment transactions. To provide a better perspective of the service availability, the numbers presented include all cities, including those without websites.

Nineteen percent of cities accept online payments for services and fees. Different types of payments accepted include bills for water, waste pickup, and electricity. There were also collections for franchise fees, and municipal court fines and fees. Every collection means observed featured the participation of an outsourced third party.

Table 4.3	***Accepts electronic payment***	% No	% Yes	% N/A	% Unk
	Does the city website offer to accept payment for any fee or tax electronically?	63.9%	19.4%	16.7%	0.0%
	Does the city accept credit card (and offline debit card) payment?	63.9%	16.7%	16.7%	2.8%
	Does the city accept online debit card payment?	66.7%	11.1%	16.7%	5.6%
	Does the city accept electronic funds transfer through the ACH?	66.7%	11.1%	16.7%	5.6%

Of the nearly 20 percent of cities that accepted electronic payments, 86 percent accept payment by credit card, while 57% accepted payment by credit card, offline debit card and electronic funds transfer. In general, accepting electronic payment over the internet is an unusual and infrequent activity among small communities compared to the 53% of cities over 10,000 that do. Accepting electronic payment can increase social trust by meeting citizen expectations for accomplishing transactions by modern means (Welch et al 2004, 378).

Summary of e-Services

The majority of the cities studied accepts electronic communications from their constituents, and strives to make the initiation of transactions possible by tendering offers of service online. Relatively few (20%) cities have enhanced their networks to allow the completion of transactions online by accepting electronic payment. Even fewer (15%) cities provide software to fill out and submit a form or service request online.

The Cities of La Grange, Sunset Valley, Bee Cave and Smithville stood out among the field in the adoption of government e-Services. La Grange and Smithville accepted a wide range of payment options for government services. Bee Cave and Sunset Valley afforded their citizens great latitude to electronically request and receive open records under the Texas Public Information Act.

e-Administration

Establishes electronic identity and network

This category describes a city's progress in establishing an authoritative digital presence. A city benefits from a secure intranet and central database "for more efficient and cooperative interaction" among its departments (Moon 2002, 425). Eighty percent of the study population asserted an official website, accepting the additional responsibility the law imposes for posting required information. Ninety seven percent of cities with a population over 10,000 report having websites (ICMA 2011, 1). In one instance, a city had two website addresses, one in the government and one in the commercial domain; it claimed the commercial domain address as the official one. Only 14% of the cities had sites registered in government domains, whereas 23% of cities over 10,000 report the use of the .gov domain.

A total of six cities did not claim to possess official sites. Four of them had no sites at all, while two benefited from sites that they declared to be "unofficial". Four of these cases were confirmed by email, one by telephone, and the sixth was eventually declared "unofficial" by the unofficial website's registering agent.

Of the 30 sites that claimed official websites, four declined to confirm them by email. This condition had not been anticipated, and caused an adjusted procedure to first attempt to confirm their authenticity on the parent county website, then to accept the use of the term "official" at face value on the city website. One of the thirty could not be confirmed as official either by email to city leaders, by its contents, or as an official link on the Williamson County site. This was troubling in that the apparent city website is situated in the commercial (.com) domain, where its authenticity as a government website could not be warranted.

A best practice for government websites is to provide a responsive email address within it (HowTo.Gov 2011), as practiced by nearly 70% of the cities examined. These data include the six cities without websites.

Table 4.4	***Establishes electronic identify and network***	% No	% Yes	% N/A	% Unk
	Does the city have a website?	16.7%	80.6%	0.0%	2.8%
	Does the city have a website situated in a public domain (.gov or .us)?	69.4%	13.9%	16.7%	0.0%
	If the city has a website, does it provide at least one email address for general communications?	16.7%	83.3%	0.0%	0.0%
	If the city does not have a website, does it have an email address for general communications?	0.0%	100.0%	0.0%	0.0%

Cities, even small ones, are finding it difficult to serve their citizens without a digital presence. Cities without official websites tended to provide contact information on the community or chamber of commerce websites. A couple of sites questionably could be considered "official" despite the "official" denial. These sites offered official records that might be inappropriate for a private sector entity to store and offer as authentic public documents (such as ordinances and council agendas/minutes) – see Appendix 5.

Publishes electronically

This category addresses fulfillment of the basic legal requirement for electronic government in Texas cities – posting of key public notices and information. A specific place on city websites for posted public notices was not common. The majority of cities posted notices of city council meetings under the heading “Agendas”. Posting the Agenda is a best practice as it not only provides notice of the pending meeting, but an alert as to the content of it as well (Texas law only requires posting agendas by cities of 48,000 or more residents) (Attorney General 2011, 4).

Ninety percent of cities with websites had agendas or notices posted for city council meetings, even archived copies which were not required. Sixty percent of cities had budgets posted. About a quarter of the cities had notices of their hearings for tax rate increases; another quarter had no evidence of having posted these seven days in advance. No cities had posted completed statements of conflicts disclosure by elected officials or certain vendors. Every city website but one had information available on the website in addition to the statutory minimum. The percentage for Notice of Property Tax Hearings rated “N/A - not applicable“ is attributable to there being no increases in property taxes in those cities.

Table 4.5	***Publishes electronically***	% No	% Yes	% N/A	% Unk
	If the city has a website, does it post:				
	Notices of Open Meetings?	10.0%	90.0%	0.0%	0.0%
	Adopted Budget?	40.0%	60.0%	0.0%	0.0%
	Annexation Plan?	100.0%	0.0%	0.0%	0.0%
	Notice of Annexation Hearings?	69.4%	13.9%	0.0%	0.0%
	Notice of Property Tax Hearings?	33.3%	26.7%	16.7%	23.3%
	Completed Conflicts Disclosure forms?	100.0%	0.0%	0.0%	0.0%
	Does the city have other records and notices posted on its website?	3.3%	96.7%	0.0%	0.0%

Cities seemed to be making an earnest effort to post notices of open meetings, and budgets as soon as they become available. It was striking that no situations requiring conflicts disclosures seemed to have existed in the thirty cities with websites. While only 60% of cities had the current budget posted, a considerably higher had the previous year's budget posted.

A best practice was noted on the Dripping Springs city website, where the current set of public notices in effect were grouped together and could be easily located (see Figure 4.1).

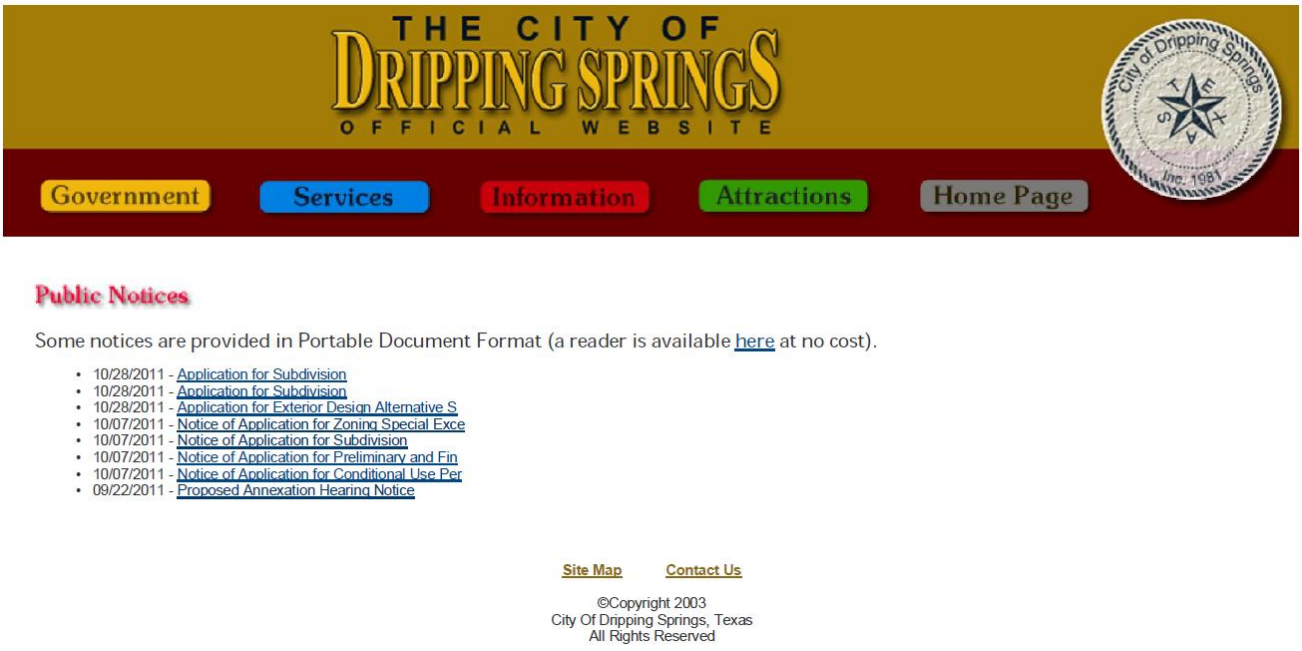


Figure 4.1 Dripping Springs Public Notices

Conducts e-Procurement

This category measured a city's participation in electronic procurement. Nearly half of the cities participate in the Texas Comptroller of Public Accounts (CPA)

Cooperative Procurement (CO-OP) program. In order to participate in the CO-OP, a local government must supply the CPA with an email address it warrants as authoritative and authorized to obligate funds. All offers of goods and services are made online, and acceptance of those offers (ordering) is done online. There was evidence of activity on the Electronic State Business Daily by one city. Two cities had evidence of solicitations for bids or proposals on their websites.

Table 4.6	***Conducts e-Procurement***	% No	% Yes	% N/A	% Unk
	Does the city participate in the Texas Comptroller CO-OP (pooled procurement) program?	52.8%	47.2%	0.0%	0.0%
	If the city participates in CO-OP, does it use the Electronic State Business Daily?	44.4%	2.8%	52.8%	0.0%
	Does the city website contain any current or past notices of solicitations for bids?	77.8%	5.6%	16.7%	0.0%

Pooled procurement and electronic solicitations for proposals are not yet a common practice in small cities. Electronic procurement has become so common, performed by over half of all cities surveyed in 2000, that ICMA no longer includes it in surveys of local e-gov (ICMA 2001, 3).

Summary of e-Administration

A recently published report of electronic government diffusion at the local level, based on data collected between November 1, 2006, and September 10, 2007, found e-gov present in only 8.5% of cities under 1,000 (Wohlers 2010, 94). The Texas capital area was remarkable in that 80% of its cities under 5000 had functioning electronic government, including those cities with a population less than a thousand (eight out of ten). If you want to play, you have to show up to the game.

A hundred percent of the cities had an email address that could be used to communicate with them. The last address was obtained some two weeks into the research, with the help of the local chamber of commerce. Over the course of research, delivery receipts were obtained for 100% of these city email addresses. An actual email address, not just an intranet capability, was advertised in 83% of the thirty official city websites.

The Cities of Wimberley, Bee Cave, Granite Shoals, Meadowlakes, and Schulenburg were prominent in their conduct of e-Administration. Schulenburg was a leader in establishing an authoritative electronic identity. Bee Cave, Granite Shoals, and Meadowlakes had excellent electronic publishing on their websites. Wimberley was the most active in e-Procurement.

e-Democracy

Responds to communication

Responsiveness is a hallmark of public service. West, one of the best known chroniclers of e-gov, tested responsiveness of government offices by emailing an inquiry into to what their office hours were (2004, 19). In this research, three cities declined to acknowledge receipt of the research introduction and request, or to allow a delivery receipt to be returned. Ultimately, six cities did not respond with the content that was requested - authentication of the city web address or the absence of one. In four cases, mayors responded after their city staff had not.

Table 4.7	***Responds to communication***	% No	% Yes
	Did the city acknowledge receipt of the introduction email?	8.3%	91.7%
	Did the city respond to the research introduction email and verify its website address if any?	16.7%	83.3%

Table 4.8 details more information on the responsiveness of the study population. Over half of cities responded within five working days. City Secretaries or Administrators provided the bulk of the responses (83%). Between spam filters, conservative communications policies, and security concerns, it is easy to conjecture that some residents' email to their small cities may not be answered any more rapidly than if it were sent by US mail. One city administrator objected to receiving the research introduction by email, suggesting that postal mail was more appropriate than "phishing".

Table 4.8	***Responses to inquiry received within:***					
2 days	4 days	6 days	8 days	10 days	11 +	None
8	4	4	3	1	10	6

The average response time for replies received was 7 days, or 5 working days.

Offers Transparency

Financial transparency statistics are displayed for all cities, not just those with websites. Cities without websites may provide financial transparency on the Texas Transparency website, merely by reporting the location of the file for their financial documents. The City of Bruceville Eddy, which has a population comparable to the cities in this study population, provides the location of its financial transparency

documents on a file server, not its website. Transparency is a goal of both the federal and state governments.

Cities, political subdivisions of the state of Texas, may wish to strive for higher levels of transparency. Financial records and reports had the lowest level of transparency. One bright spot in political transparency was the large percentage (50%) which made council agendas and minutes available, none of which were required by law. Less than 40% of cities displayed contact information for elected officials (telephone numbers or email addresses).

An exciting finding in the conduct of research was the discovery of streaming audiovisual content of city council meetings in Sunset Valley. While 50 percent of cities over 10,000 offer this feature (ICMA 2011, 2), this was an unexpected result for a small city.

Table 4.9	***Offers transparency***	% No	% Yes	% N/A	% Unk
	Does the city have a Financial records and reports page?	77.8%	22.2%	0.0%	0.0%
	Does the city display its annual financial report online?	69.4%	30.6%	0.0%	0.0%
	Does the city display a Check/Expense register online?	83.3%	16.7%	0.0%	0.0%
	Does the city website contain contact information (telephone or email) for elected officials?	44.4%	38.9%	16.7%	0.0%
	Does the city website provide audio or audiovisual streaming content of meetings?	80.6%	2.8%	16.7%	0.0%
	Does the city website contain city council meeting agendas and minutes?	33.3%	50.0%	16.7%	0.0%

Small city residents enjoy a relatively low level of financial transparency of government, and only a slightly higher level of political transparency. Fifty percent of

cities provided city council meeting agendas and minutes, which are not required by state law, as contrasted with 93% of cities over 10,000 population (ICMA 2011, 3).

Provides citizen forum

Two cities, one with an official website and one with an unofficial one, displayed the Facebook logo which was hyperlinked to a Facebook group page. Over 90% of cities over 10,000 population have a presence on Facebook (ICMA 2011, 4). Mountain City provided a secure forum, where citizens who were registered could log-in and communicate asynchronously. No web logs (or blogs) or other for a were found on city websites.

Table 4.10	***Provides citizen forum***	% No	% Yes
	Does the city website indicate an "official" presence on any social media site?	93.3%	6.7%
	Does the website allow officially monitored citizen exchanges with the city and one another?	96.7%	3.3%

There was no presence of active discussions on the Facebook pages of the two cities that advertised a Facebook presence on their websites. As this was unobtrusive research, the research did not pursue investigation of Mountain City's citizen forum. The literature had not suggested that a citizen forum was likely to be discovered. This type of social commons appears to be a best practice in affording democracy in electronic government (Coleman/Chen et al 2008, 17). In cities over 10,000 population, only 3% offer "chat rooms", and 7% sponsor "moderated discussions" (ICMA 2011, 3).

Customizes experience

The user experience is personalized by organizing content to user-defined or user-oriented display. The experience is further customized by providing for active, rather than passive notification of citizens of information they are interested in. Fully one third of the cities with websites have organized their content to make it easy for a user-defined (e.g. Resident/Business/Visitor) or user-oriented (e.g. Public Information or Development). Four cities offered Really Simple Syndication (RSS) subscription, while three offered either listserv or newsletter signup for specific content. It isn't clear how prevalent the practice of targeted active communication is among larger cities. The ICMA report indicates that 91% of cities provide a general newsletter to constituents, but doens not indicated the degree of adoption of RSS or targeted newsletters such as the City of Llano offered (ICMA 2011, 3).

Table 4.11	***Customizes experience***	% No	% Yes
	Does the city's website offer distinct categories or views of content for different types of constituents (citizens and businesses) and external parties (other political subdivisions and visitors), or different uses by various parties (such as Public Information and Development)?	66.7%	33.3%
	Does the city's website offer Really Simple Syndication notification of content changes?	86.7%	13.3%
	Does the city's website offer a "listserv" or other means of registering for notification of changes or other newsfeed in regard to a specific issue?	90.0%	10.0%

Generally, targeted communications was a much less common phenomenon than personalization of view. Site personalization was more commonly found in larger

cities, where the greater volume of content posed more difficulty in where and when to locate specific information.

Summary of e-Democracy

The rate of acknowledgement of legitimate inquiry by electronic means, while over 90%, was disappointing, as was the rate of responsiveness at 83%. The Information Age may have increased the availability of information, but it also may have cast a pall over a dimension of social trust and interaction. Electronic correspondence can increase social trust by meeting citizen expectations for accomplishing transactions by modern means (Welch et al 2004, 378). Sufficient follow-up contact was conducted to preclude attribution of unresponsiveness to mere technological failure. Hopefully, decision-makers will take into account the negative perceptions of political subdivisions that unresponsiveness can engender, rather than adhering to past practice or the advice of consultants.

The progress of small cities toward the federal and state objectives of open and transparent government may prove a critical distinguishing factor in attracting population growth and development by enhancing the perceived value of place. Small town stereotypes aside, there is room for progress in both political and financial transparency. As more “digital natives” enter the voting population, progress will be increasingly expected.

Contact information for elected officials and availability of city council meeting agendas in advance and minutes afterward were at 50% or less. It was clear that some city elected officials were not able or willing to keep up with the volume of email and

voicemail that open disclosure of contact information might yield. A common solution in many of those cities was to employ an intranet message system, in which the message sender receives an email confirming delivery of the message.

The Texas Transparency program, begun in 2010, provides an excellent roadmap to increasing financial transparency. While most cities had blank listings on the Texas Transparency directory of cities, some had made their financial reports available on the site. However, only 22% of cities consolidated access to their financial information on a recognizable page of their own website.

The Cities of Meadowlakes and Wimberley were noteworthy with regard to responsiveness. Both cities allowed delivery receipts of the research introduction to be returned to the sender. Both cities provided responsive replies to the routine request for information within three working days. This was well within the legal minimum of ten days, and the intent of the Public Information Act that public officials “promptly produce” the requested public information (Attorney General 2010, 4).

The Cities of Wimberley and Sunset Valley were leaders in open and transparent government. Wimberley’s website provided a comprehensive financial transparency page. Sunset Valley provided streaming audiovisual content of city council meetings (the only city that did so).

While two cities had a presence on Facebook, citizen input via a discussion thread was not visible on either site. Mountain City was the only city that provided a citizen forum (Figure 5.10). This was a practical approach as use of it was restricted to registered users of the city website.

The City of Llano website offered a good example of customization of the website experience. Its website offers categorization of content by its most common use through the menu “Popular Pages”. The website also allows subscribers to sign up for automatic delivery of such items as job applications, city calendar changes, and council meeting minutes (Figure 5.11).

CHAPTER 5: Conclusion

Introduction

Chapter 5 summarizes the applied research project methodology and findings using the conceptual framework.

Significant Findings

Every city reported electronic mail connectivity with constituents. Delivery receipts returned from every city email address confirmed this. Only six cities did not have official websites, with a website adoption rate of 83 percent. This was a higher adoption rate than the paucity of literature of smaller city adoption had indicated.

While 92 percent of the cities acknowledged the research inquiry, only 83 percent of the cities provided a substantive reply, i.e. confirmed the presence or absence of an official website. One city administrator finally responded with the complaint that researchers should only initiate communications by US mail. Two suburbs of Austin (Sunset Valley and Rollingwood) steadfastly declined to respond to inquiries addressed to their appointed and elected leadership, and to the website registrant.

Non-responsiveness appeared to have been the result of one or more of these factors: 1) the insulation of city workers from suspected hackers and spam by the use of security software, 2) extremely cautious policies and procedures for electronic interaction, or 3) limited freedom of the designated city points of contact to acknowledge communication. It was not clear if non-responsiveness was more the result of technological or cultural factors. Refreshingly, mayors stepped in to respond in four of the thirty cases where a response was provided,

An impressive 80 percent of the study population claimed a website as their official digital presence. However, a third of them were observed to have posted all of the records online that were required by state law, such as the adopted budget. Few small cities (less than a quarter) had taken observable measures to meet the Texas Comptroller of Public Accounts goals for open government and financial transparency. The city of Mountain City was a unique case in that it featured a citizen forum for its registered users.

None of the 20 percent of cities without official websites volunteered reasons why they had not adopted one. Of those six cities, two of them (Briarcliff and Martindale) had unofficial websites that were generally as informative as those of their peers. Three of the cities lacking websites (Bertram, Mustang Ridge and Thrall) did have email addresses listed with the CAPCOG and they promptly responded to the research inquiry. These cities were distant from urban centers. The final city of the six did not have an email address nor a fax number listed with CAPCOG or with the county website, however it did finally respond on the last day of data collection at the prompting of the local Chamber of Commerce. One web page supporting a city appeared to be official, but in fact it was not claimed as official (Appendix 5).

Recommendations for further research

Examples of citizen empowerment through e-gov do not abound. Research leading to development of a Practical Ideal type of a local government citizen forum, such as the one used by Mountain City, would be a valuable addition to the literature. Case studies of conditions leading to more profuse e-gov adoption (such as Bee Cave), or of the barriers inhibiting adoption (such as Lexington) would also be useful.

Summary of Findings/Best Practices

The purpose of this applied research project was to describe patterns of e-Government adoption by municipalities with a population between 500 and 5000 within the Capital Area Council of Governments (CAPCOG) region of Texas. This section provides tables summarizing the findings off in all the descriptive categories. The tables are organized by general category of e-Services, e-Administration, and e-Democracy. Tables 5.1 through 5.3 summarize the findings and table 5.4 provides an overall assessment and recommendations.

Table 5.1 Summary of Observed e-Services Findings

Means of accepting electronic requests	Every city had an email address. Most cities provided a general email address for the city and telephone numbers for the elected officials. If a city did not have a website, it usually used the Chamber of Commerce or Property Owners Association websites to make this information available Some cities provided an intranet email service for both appointed and elected officials (Figure 5.1).
Invitation to submit email for open records	A third of cities informed constituents that they may email requests for open records, the rest did not. Most cities had an online form to request open records. These forms usually specified a fax number or mailing address to submit a completed request to. Few cities designated a specific email address for routing email inquiries, making any city email address a valid destination (Figure 5.2).
Offer to provide open records electronically	83% of cities did not offer to satisfy open records requests electronically. This is usually required if the requestor desires it and the respondent is capable of producing it (Attorney General 2010, 11).
Online Forms	72% of all cities had forms available for downloading online. Most forms used the portable document format, however a few used the more proprietary Microsoft Word format.
Online Only Forms	Four cities had forms that could be completed online. (Figure 5.3).
Mailed or Faxed Forms	Every city that had forms online had forms which had to be mailed or faxed.
Electronic Payment	Nearly 20% of cities provided for some means of online payment.
Payment by online credit	Nearly every city website that featured online payment did so using online credit transactions (Figure 5.4). The most common uses of online payments were for city utility services
Payment by online debit or EFT through ACH	Only four city websites indicated they were able to process online (as opposed to offline) debit card or electronic funds transfer through the automated clearinghouse. (Figure 5.5)

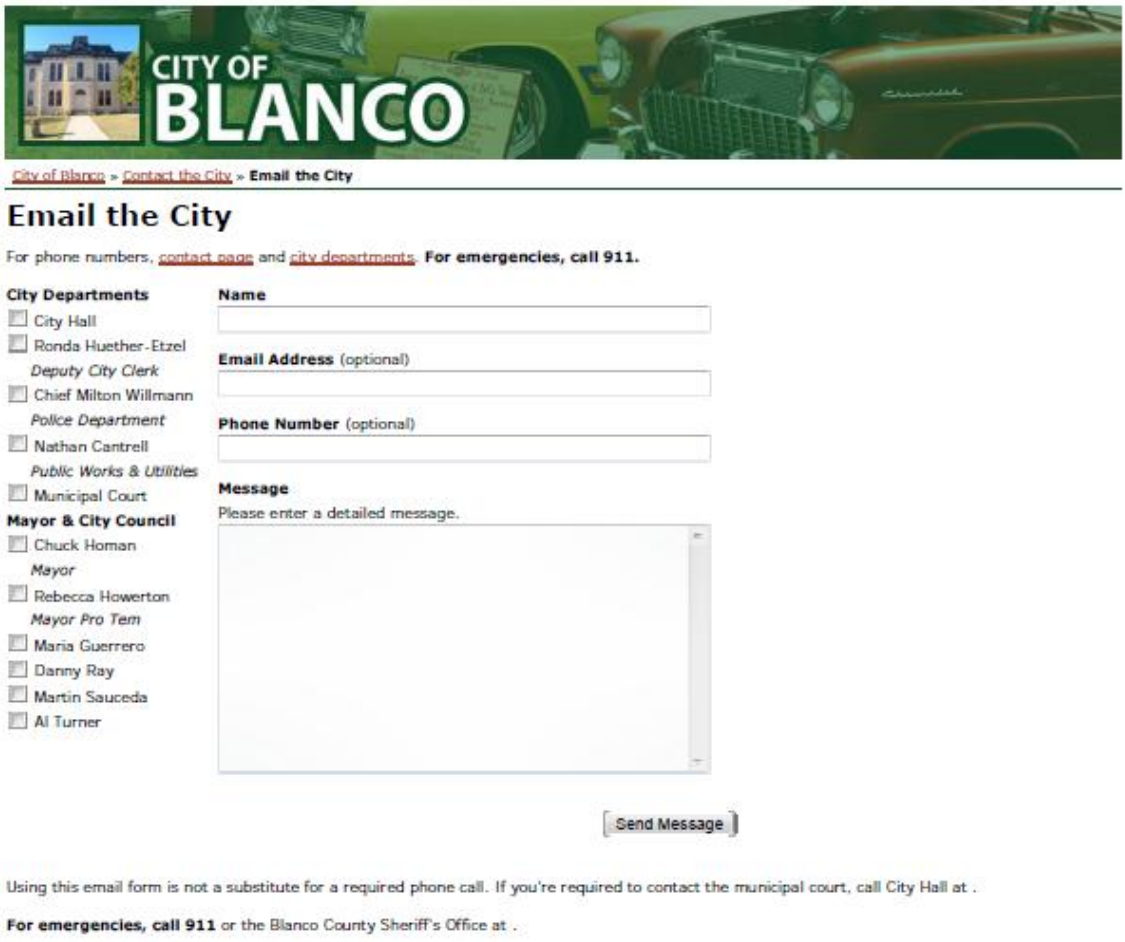


Figure 5.1 City of Blanco Intranet Messaging

_____ **E-mail or Fax transmission of the information is acceptable.** If possible, please e-mail or fax the requested information to: _____
(There is no charge for e-mail or fax transmission)

_____ **I do not want copies**, but wish only to inspect the requested information. Please call me to schedule a time when the records will be available.

In making this request I understand that the City of Liberty Hill is under no obligation to create a document to satisfy my request or to comply with a standing request for information. I further understand that the information will be released only in accordance with the Public Information Act, which may require a determination as to confidentiality by the Texas Attorney General prior to a release. I further understand the City of Liberty Hill has ten (10) business days in which to request such a determination.

Figure 5.2 Extract of City of Liberty Hill Open Records Request

Johnson City uses an online form to route time sensitive citizen complaints.

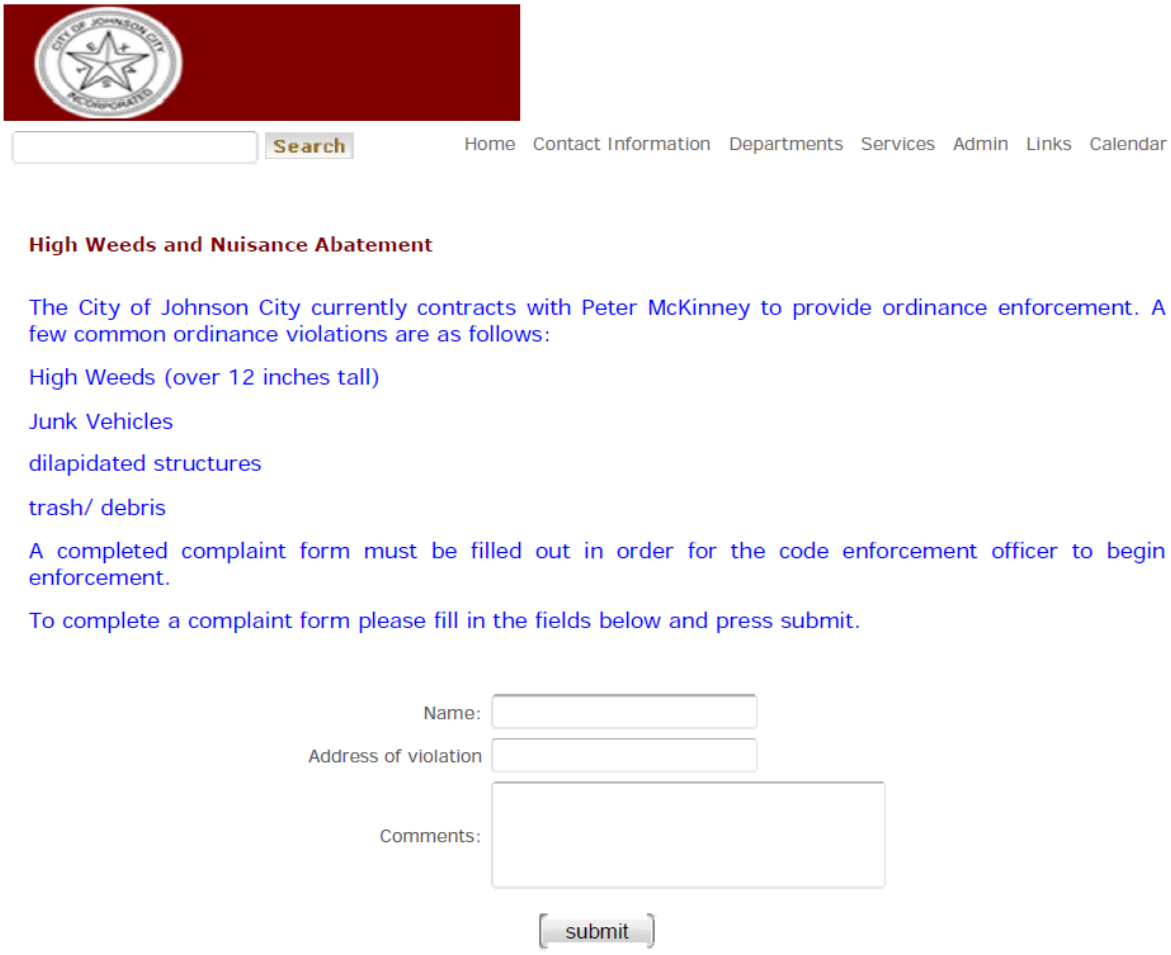


Figure 5.3 Johnson City Ordinance Enforcement Request

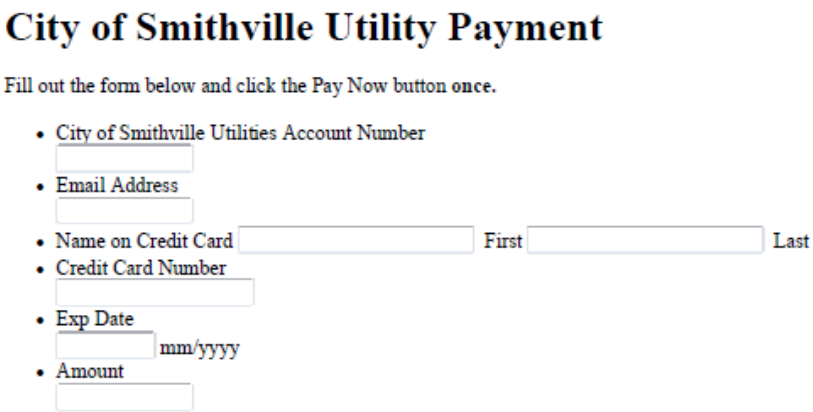


Figure 5.4 City of Smithville Utility Payment by Credit Card

The City of La Grange contracts for a full service billing support.

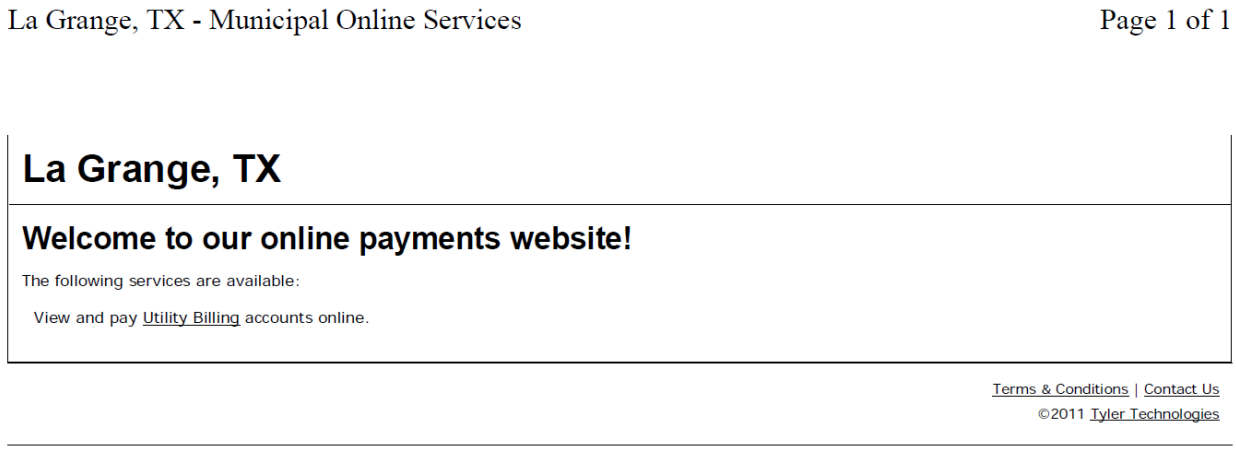


Figure 5.5 City of La Grange Online Payment Website

Table 5.2 Summary of Observed e-Administration Findings

Establishes website	These cities ranged in population between 500 and 5000. Five out of six of them had official municipal websites. This was a higher percentage than the literature appeared to predict. Two sites gave the appearance of being "official" sites, despite the denial from the site operators (See Appendix 5 for an example of one).
Public Domain	Five, or nearly 17%, of the city websites were registered in the public domain (.gov or .us). Schulenburg's website was a good example of providing an authoritative digital presence - http://www.ci.schulenburg.tx.us/ .
Authoritative Email Address	Every city in this group directly or indirectly acknowledged a valid email address. 83% of the official websites disclose an email address that a website visitor may use. Email traffic to many of these addresses is promptly read and referred for action. Many, but not all, cities use a "Contact Us" entry on the Home Page to provide visitors a familiar means of locating directory information about the city. This was a practice of the best sites. (Figure 5.6)
Required Website Postings	Over 90% of required city council meeting notices were posted to city websites. Only 60% of current budgets were posted to websites. Notices were frequently not grouped together. A best practice was to group them onto one page (Figure 4.1). No completed TEC Form CIS (Conflicts Disclosure Statements) or Annexation Plans were posted. Only 26.7% of cities had Notices of Tax Hearings posted, and 13.9% of cities had Notices of Annexation Hearings posted.
Other Website Information	Every city but one posted more than the legally required amount of information on its website. (That site was under construction.) Some common uses were forms to initiate transactions with the city, calendars of city and community events, and links to prominent community websites.
CO-OP Participation	Just under half of the cities were listed by the Texas CPA as members of the Cooperative Purchasing (CO-OP) program, a volume purchasing program administered electronically.
Electronic State Business Daily	One of the members of the CO-OP program, Johnson City, was listed on the Electronic State Business Daily as having had a recent transaction posted.
Electronic Solicitations	Two city websites indicated that electronic solicitations had been posted in the past. (Figure 5.7)

Figure 5.6 City of Sunset Valley Contact Information Page

INVITATION FOR BIDS

Separate sealed bids addressed to the City of Wimberley, will be received until 10:00 A.M. on Friday, the 1st day of July, 2011 at City Hall located at 221 Stillwater in Wimberley, Texas at which time bids will be publicly opened and read aloud for furnishing all labor, material, tools and equipment and performing all work required for YEAR 2011 STREET RECONSTRUCTION at five separate work areas as setforth in bid schedules provided in the Bid Form, as shown on the Plans and generally described as follows:

Cliffview Drive from Glenwood Drive to intersection with Rockwood Drive (750 LF). Shape and recompact existing base, add crushed limestone base and recompact to 20' width with 18' width two course surface treatment pavement. Construct 65 LF of 15" RCP and 45 LF of 18" RCP with six sloping headwalls.

Smith Creek Road (1,565 LF) beginning and ending loop road off F.M. 3237. Prepare existing pavement and overlay with two course surface treatment to match existing width (varying 15' - 18'). Construct 240 LF of 24" RCP, three precast headwalls and 230 LF road ditch.

Twilight Trail beginning at F.M. 2325 and extending 642 LF to end. Remove existing pavement, pulverize existing base to 6" depth, add crushed limestone base and recompact to 24' width with 20' width two course surface treatment pavement. Construct 455 LF of 18" RCP, five precast grate inlets, 60 LF concrete flume and one headwall.

Malone Drive beginning off Ranch Road 12 and extending 175 LF. Shape and compact existing base, add crushed limestone base and recompact to 22' width with 20' width two course surface treatment pavement.

Rockwood Drive beginning at River Road and extending 725 LF to past intersection with Cliffview Drive. Remove existing base and pavement, add crushed limestone base and recompact to 18' width with 16' width two course surface treatment pavement.

Bids must be submitted on the Bid Form provided. The envelope containing the bid shall indicate clearly on the front that it is a bid for YEAR 2011 STREET RECONSTRUCTION and shall state the mailing address and name of the Bidder on the front of the envelope. Bids received after the date and time specified above shall be returned unopened.

Figure 5.7 City of Wimberley Invitation for Bids

Table 5.3 Summary of Observed e-Democracy Findings

Responsive	Over 91% of the cities acknowledged receipt of the research request. 83% of the cities replied responsively confirming the presence or absence of a municipal website, over half within 5 working days. Four mayors responded on behalf of their cities. One city administrator refused to respond except by mail.
Financial Transparency	Only 60% of cities displayed their current budgets on their city website, or barring that, on the Texas Transparency website. This is a required publication and was listed under e-Administration, but is repeated here for emphasis. Only 22% of cities consolidated financial information onto a financial transparency web page (Figure 5.8). Only 30% of cities displayed their audited financial reports online. No cities displayed their municipal check/expense register online.
Political Transparency	A bright spot was that 50% of the cities displayed city council meeting agendas and minutes, normally a requirement only for cities of 48,000 residents or more (Figure 5.9) Less than 40% of cities provided a means of contacting elected officials (telephone numbers or email addresses). Some cities have overcome the security concerns by providing intranet connections to elected officials. One city website, Sunset Valley, offered streaming audiovisual content of city council meetings.
Citizen Forums	Two cities displayed Facebook logos on their websites (one website was official and the other was not). Neither had an active discussion thread for citizen input on their Facebook Group page. Mountain City advertised the presence of a forum on its website, where citizens could have meaningful exchanges with one another and the city (Figure 5.10)
Customization of web experience	A third of city websites offered personalization of content view, based on purpose of use or type of user. Four cities offered RSS feeds, and three offered “listserv” or newsletter subscriptions (Figure 5.11)

Official Web Site of
City of Meadowlakes, TX

Home
Golf Course
City Council agendas, Minutes and Resolutions
City Services
Municipal Court
Public Works Dept.
Neighborhood Watch
Meadowlakes Public Facility Corporation
City Ordinances
Contact Information
Online Forms

City Financials & Budget for current year

Proposed FY 2012 Budget filed 8-10-11.pdf
Notice of Public Hearing on Tax Increase.pdf
11-10-11 General Fund Financial Position.pdf
11-10-11 Financial Position Utility Fund.pdf
11-09-13 Financial Position Utility Fund.pdf
11-09-13 Financial Position General Fund.pdf
11-07-12 Financial Position Utility Fund.pdf
11-07-12 Financial Position General Fund.pdf
11-06-14 Financial Position Utility Fund.pdf
11-06-14 Financial Position General Fund.pdf
11-05-10 Financial Position Utility Fund.pdf
11-05-10 Financial Position General Fund.pdf
11-04-12 Financial Position Utility Fund.pdf
11-04-12 Financial Position General Fund.pdf
11-03-08 Adopted Audit for FY2010.pdf

Figure 5.8 City of Meadowlakes Financial Transparency page

City of Niederwald

Employment | Government | Calendar | Committees | Departments | Community | News and Events

Contact Information

Phone :

Address :
13851 Camino Real
Niederwald, TX
78640-4807
USA

Contact us

Home

Government

Niederwald City Council Elected Officials

Mayor	Reynell Smith
Mayor Pro-tem	Monique Boitnott
Council Member	Harvey Keebler
Council Member	Charles Bisson
Council Member	Dianne Shirey
Council Member	Rick Riel

Council Agendas and Minutes

Agenda June 13, 2011
Minutes June 13, 2011
Agenda July 11, 2011
Minutes July 11, 2011
Agenda August 08, 2011
Agenda September 12, 2011
Agenda October 10, 2011

Council General Information

Figure 5.9 City of Niederwald City Council Agendas and Minutes

Mountain City offers a forum for its citizens.

Figure 5.10 Mountain City Discussion Forum for Citizens

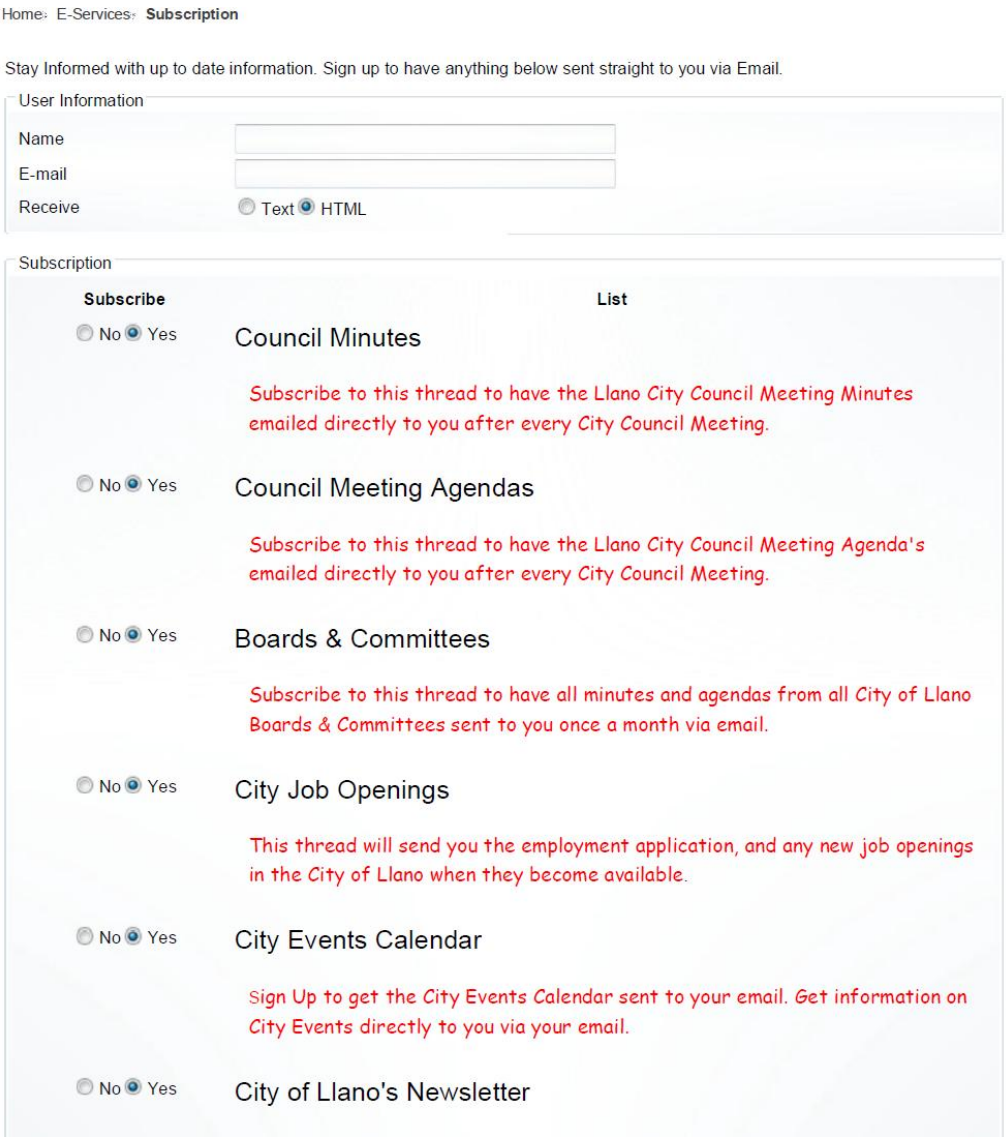


Figure 5.11 City of Llano e-Services Information Subscription

Table 5.4 Overall Assessment and Recommendations of Local e-Governance

Category	**Assessment** VG=Very Good G=Good F=Fair P=Poor	**Recommendations for Improvement**
Accepts electronic requests	**G**	1. Clarify procedures to request and receive open records electronically. 2. Designate persons who will receive open records requests.
Facilitates transactions	**F**	1. Incorporate the use of scanned documents transmitted by email instead of by fax. 2. Increase the number of forms that can be completed online.
Accepts electronic payment	**G**	1. Develop the business model for when electronic payment will become cost effective.
Establishes electronic identify and network	**G**	1. Brand the site as “official”. 2. Designate an email address for general communications.
Publishes electronically	**G**	1. Post current budgets. 2. Confirm business process for when Conflicts Disclosures are signed and recorded so they can be posted online.
Conducts e-Procurement	**G**	1. Consider joining CO-OP if procurement volume justifies the cost. 2. Post requests for bids on the website as well as in the newspaper.
Responds to communication	**F**	1. Check that for each implied question there is an item of information given in response. 2. Examine policies that may be inhibiting responsiveness, whether due to technical or administrative reasons.
Offers Transparency	**P**	1. Post links to current financial reports on the Texas Transparency page – it is good and free advertising of information competence. 2. Post means to contact elected officials.
Provides citizen forum	**F**	1. Consider establishing a link to forum that offers some means of citizen interaction – community blog, social media page, or a comments page on the city website.
Customizes experience	**F**	1. Consider tailored newsletter feeds to subscribers that express an interest, such as how the City of Llano operates (Figure 5.11) 2. Organize content based on user group or purpose, not on how the city is organized.

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Appendix 1 – Coding Capture Form

Categories	Q#	Criteria to be Evaluated	Value	Note
Coding Key Values: 0=No, 1=Yes, 2=Not Applicable, 3= Could not determine				
Accepts electronic requests				
	1	Does the city have a means of accepting electronic requests or reports from constituents?		
	2	Does the city website invite electronic requests for open records under the Public Information Act?		
	3	Does the city website offer to satisfy open records requests with electronic (digital) data if desired by the requestor?		
Facilitates transactions				
	4	Does the city have forms online?		
	5	Can any online forms be completed online?		
	6	Do some online forms have to be downloaded, printed and mailed?		

Categories	Q#	Criteria to be Evaluated	Value	Note
Coding Key Values: 0=No, 1=Yes, 2=Not Applicable, 3= Could not determine				
Accepts electronic payment				
	7	Does the city website offer to accept payment for any fee or tax electronically?		
	8	Does the city accept credit card (and offline debit card) payment?		
	9	Does the city accept online debit card payment?		
	10	Does the city accept electronic funds transfer through the ACH?		
Establishes electronic identity and network				
	11	Does the city have a website?		
	12	Is the city website situated in a public domain (.gov or .us)?		
	13	Does the city website provide at least one email address for general communications?		
	14	If the city does not have a website, does it have an email address for general communications?		

Categories	Q#	Criteria to be Evaluated	Value	Note
Coding Key Values: 0=No, 1=Yes, 2=Not Applicable, 3= Could not determine				
Publishes electronically				
	15	If the city has a website, does it post:		
	a	Notices of Open Meetings?		
	b	Adopted Budget?		
	c	Annexation Plan?		
	d	Notice of Annexation Hearings?		
	e	Notice of Property Tax Hearings?		
	f	Completed Conflicts Disclosure forms?		
	16	Does the city have other records and notices posted on its website?		
Conducts e-Procurement				
	17	Does the city participate in the Texas Comptroller CO-OP (pooled procurement) program?		From public data
	18	If the city participates in CO-OP, does it use the Electronic State Business Daily?		From public data
	19	Does the city website contain any current or past notices of solicitations for bids?		

Categories	Q#	Criteria to be Evaluated	Value	Note
Coding Key Values: 0=No, 1=Yes, 2=Not Applicable, 3= Could not determine				
Responds to communication				
	20	Did the city acknowledge receipt of the introduction email?		
	21	Did the city respond the research introduction email and verifying its website address?		
Offers Transparency				
	22	Does the city have a Financial records and reports page?		
	23	Does the city display its annual financial report online?		
	24	Does the city display a Check/Expense register online?		
	25	Does the city website contain contact information (telephone or email) for elected officials?		
	26	Does the city website provide audio or audiovisual streaming content of meetings?		
	27	Does the city website contain city council meeting agendas and minutes?		
Provides citizen forum				
	28	Does the city website indicate an “official” presence on any social media site?		

Categories	Q#	Criteria to be Evaluated	Value	Note
Coding Key Values: 0=No, 1=Yes, 2=Not Applicable, 3= Could not determine				
	29	Does the website allow officially monitored citizen exchanges with the city and one another?		
Customizes experience				
	30	Does the city's website offer distinct categories or views of content for different types of constituents (citizens and businesses) and external parties (other political subdivisions and visitors)?		
	31	Does the city's website offer Really Simple Syndication notification of content changes?		
	32	Does the city's website offer a "listserv" or other means of registering for notification of changes or other newsfeed in regard to a specific issue?		

Appendix 2 – Procedures for Measuring Observations

Procedure for Observations	
Variable	*Procedure for Measurement*
1. Does the city accept electronic reports and requests from constituents?	1. Confirm that the website contains an email address or online form to capture communication. Visually search homepage and first tier menu for presence of email address or "Contact Us". Check CAPCOG and Chamber of Commerce websites for listed email address.
2. Has the city identified procedures to request public information online or by email?	2. Search home page and first tier menus for "Public Information" and "open records". Conduct site search for "Public Information" and "Open Records". Record if any instructions specify mail or fax but not email.3. Note and record presence or absence of this during the performance of Step 2.
3. Does the city offer to satisfy public information requests by electronic means?	
4. Does the city have forms online?	4-6. Search home page and all first tier menu for "forms" and "requests". Search home page for "forms"and "requests". Do site search for "forms" and "requests". Code 6 "0" if any form that can't be completed online does not contain an email address or fax number to send the completed form to.
5. Can any online forms be completed online?	
6. Do some online forms have to be downloaded, printed and mailed?	
7. Does the city website offer electronic payment for any fee or tax?	7-10. Search home page, first and second tier menus for "services". Do site search for "services", "online payment", "electronic funds transfer" and ACH.
8. Does the city website accept credit card (and offline debit card) payment?	
9. Does the city website accept online debit card payment?	
10. Does the city website accept electronic funds transfer through the ACH?	
11. Does the city claim an official website?	11. Search home page for use of "official" and record. Response from designated email address will also establish.
12. Does the city have a website situated in a public domain (.gov or .us)?	12. Record the "official" Uniform Resource Locator (URL) address in Table 3.3.

Procedure for Observations	
Variable	*Procedure for Measurement*
13. Does the city website provide at least one email address for general communications?	13. Refer to email address found (or not) in Step 1. Perform search of home page and first tier menus for "Contact".
14. If the city does not have a website, does it have an email address for use in general communications?	14. Use Capital Area Council of Governments website to obtain email address. If none, request assistance from the county website webmaster.
15. If the city has a website, does it post: Notices of Open Meetings, Adopted Budget, Annexation Plan, Notices of Annexation Hearings, and Notices of Property Tax Hearings, and Conflicts Disclosure Forms?	15. Search home page, first tier menu, and entire site for: "Notice", "Budget", "Annexation", and "Disclosure". Perform site search for "Texas Ethics Commission" and "Form CIS". Note: Tax Hearings are required to be posted 7 days in advance, Annexation Hearings between 10 and 20 days in advance.
16. Does the have any other records and notices posted on its website?	16. During performance of Step 15 visually note and record these.
17. Does the city participate in the Texas Comptroller CO-OP program (volume procurement allowing use of TxMAS and TxSmartBuy.com)?	17. Obtain by searching cities listed in the Texas Windows on State Government listing of CO-OP participants: http://www.window.state.tx.us/procurement/prog/coop/coopmemb/
18. If the city participates in CO-OP, does it use the Electronic State Business Daily (ESBD)?	18. For each "yes" to Step 17, check for activity by that account indicated by listing of the city at the ESBD: http://esbd.cpa.state.tx.us/
19. Does the city website contain any electronic solicitations for bids?	19. Search home page, first menu and entire site for "bids" and "request for proposals".

Procedure for Observations	
Variable	*Procedure for Measurement*
20. Did the city acknowledge receipt of the research introduction email?	20. Record the email address that provided an interim or final response, if any. Record whether the requested electronic return receipt was provided.
21. Did the city respond to the research introduction email by verifying its official website address, if any?	21. Record the email address that provided a substantive response and the date and time of the response. Record the capacity of respondent, date and time of any other form of response.
22. Does the city have a Financial records and reports web page?	22. Search home page, first and second tier menus for "financial". Do site search for "financial". Record location and presence of the budget, AFR, and Check/Register.
23. Does the city display its annual financial report (AFR) or certified AFR online?	23. Note if AFR/CAFR was detected in Step 22.
24. Does the city display a Check/Expense register online?	24. Note if Check/Expense Register was detected in Step 22.
25. Does the city website contain contact information or means (telephone or email) to contact elected officials?	25. Search first and second tier menus for "Contact". Search home page for "Contact". Do site search for "Contact", "Mayor", "Councilmen", and "Aldermen". Note presence of telephone/email information.
26. Does the city website provide audio or audiovisual streaming content of meetings?	26. Search first and second tier menus for "Meetings". Search home page for "Meetings". Do site search for "Meetings". Note presence of file extensions indicating audio or visual content of proceedings.27. Search the home page, first tier menu, and entire site for "agenda" and "minutes".
27. Does the city website contain public meeting agendas and minutes?	
28. Does the city website advertise an "official" presence on any social media site?	28. Visually inspect home page for logos of Twitter, Facebook, Linked-In, and any other social media. Search home page and site for "Facebook", "Twitter" "LinkedIn", and "social media".
29. Does the website allow officially monitored citizen exchanges with the city and one another?	29. Search first and second tier menus for "Forum", "Letter", and "Opinion". Do site search for these terms. Record page listing for any published communication from constituents noted during this search.
30. Does the city's website offer distinct categories or views of content for different types of viewers?	30. Search home page for choice of different view or content for groups such as constituents (citizens and businesses) and external parties (other political subdivisions and visitors), or use such as "Public Information" and "Development".
31. Does the city website offer	31. Search home page and first tier menu for "RSS".

Procedure for Observations	
Variable	*Procedure for Measurement*
Really Simple Syndication notification of newsfeed or content changes? 32. Does the city website offer a “listserv” or other means of constituent registration for notification of new content in regard to a specific issue?	Visually search the home page for its logo. Do site search for “RSS”. 32. Search home page and first tier menu for “listserv”. Search home page for “listserv”. Do site search for “listserv” and “notification”. Scan home page for newsletter subscriptions to specific topics.

Appendix 3 – Texas Comptroller Leadership Circle Criteria

Major Criteria

Adopted budget – The budget must be the official adopted budget for the current fiscal year. It must show proposed annual revenues and expenditures by major funds within broad categories of program, function, and/or department.

Annual financial report – The annual financial report (AFR) or comprehensive annual financial report (CAFR) must represent the most recently audited fiscal year. To be current, the audit must be posted within 12 months of the end of the fiscal year.

Check/Expense register – The current on-line check/expense register must be no older than 120 days, and show date, payee and amount paid for ALL expenses paid by the local government. If not already included in the regular Accounts Payable Check Register, payroll and bank transfers should be consolidated and added to the AP Check Register, or listed in a separate report. This report should include only totals for employee salaries, fringe benefits and other payroll deductions to avoid release of confidential data on individual pay and withholdings.* By placing a check mark next to the Check/Expense Register criteria (on Page 6 under Major Criteria) the local government affirms that it has provided a complete record of its expenses for the period indicated.

Financial transparency Web page – One Web page where users can find all three financial documents and any other relevant information. This can be a page dedicated specifically to financial transparency or a financial officer's Web page or a more general open government Web page. There must be a link on the homepage that directs users to the financial transparency Web page.

Minor Criteria

Local government contact information – The main physical address and phone number of the local government must be posted on the homepage or on a dedicated contact Web page. If the contact information is available on a contact Web page, there must be a link on the homepage to the contact Web page.

Contact information for elected officials – A method of directly contacting each elected governing official by phone or e-mail must be provided. The contact information must be specific to each elected official. Contact information is required for county judges and commissioners, mayors and city council members and school board members. For special districts, contact information must be provided for any board members who are elected to the board by the public and any members who hold local elected positions.

Public information request – Instructions and a point of contact for submitting an open records request must be provided. The Comptroller's office also recommends creating a form the public can use to submit a public information request and posting a link to the instructions on the financial transparency Web page.

Easy access to financial documents – Each current financial document must be viewable within three clicks from the homepage.

Budgets for three fiscal years – The adopted budgets for the current fiscal year and the two preceding fiscal years are required.

Annual financial reports for three fiscal years – The annual financial reports or comprehensive annual financial reports for the three most recently audited fiscal years are required.

Check registers for three fiscal years – Thirty-six consecutive months, including the most current month's check/expense register are required. The Comptroller's office recommends consolidating check registers by fiscal year or compiling check register entries in a searchable database. (Note that the new major criteria for the 2011 check/expense register applies only to current fiscal year expenses, and is not retroactive, due to the difficulty of updating older check registers that have already been online.)

Searchable check/expense register – The check register must be presented in a searchable format. Microsoft Word documents, Excel spreadsheets, and HTML are examples of searchable formats. PDF documents may be searchable depending on how they are created. A database that includes user-selectable filters would also be acceptable.

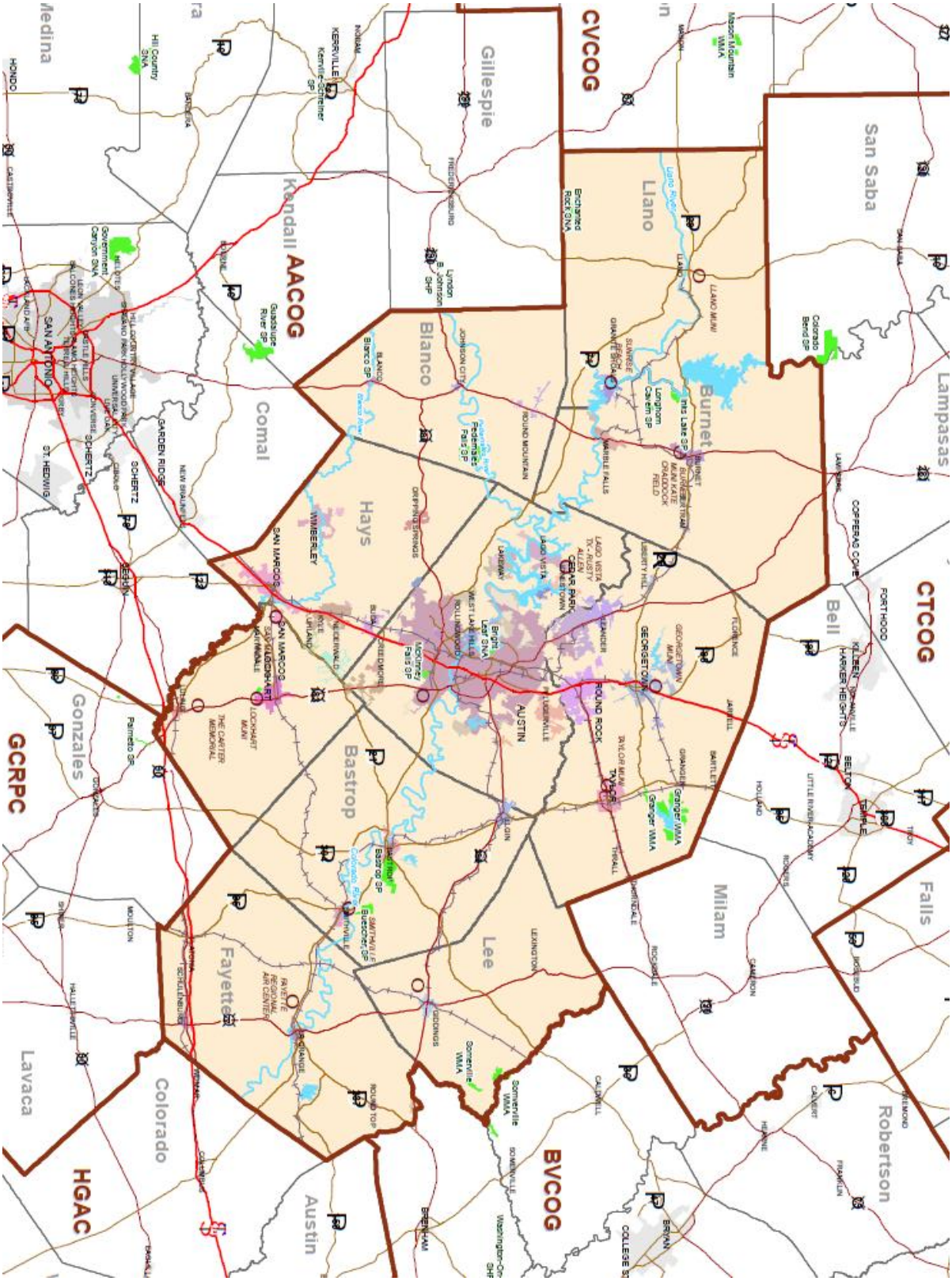
Descriptive check/expense register – Each entry in the check register must include an explanation of the reason for the payment, a description of the item purchased or a brief explanation of the purpose of the expenditure.

Visual representation of financial data – An example of a visual representation would be a chart or image that makes the financial data more easily understood by the public.

Current tax rates – A Web page must present an overview of the current rates of property, sales, hotel and other local taxes imposed by the local government. For more comprehensive information, the Web page may direct the public to specific financial documents or other websites.

Raw format budget – A raw format budget is posted in an Excel spreadsheet, HTML, XML, XBRL or other machine-readable format. PDF is not a machine-readable format. This increases the ease with which a local government's budget may be analyzed.

Appendix 4 – Map of Capital Area Council of Governments



Appendix 5 – Is this an official city website?

Answer: According to the website registering agent, the answer is “No”.

Appendix 6 – Electronic Government Rankings of Upper Half

City	e-Services		City	e-Administration		City	e-Democracy		City	Total
La Grange	8		Wimberley	9		Llano	8		Bee Cave	20
Sunset Valley	8		Bee Cave	8		Blanco	7		Sunset Valley	19
Bee Cave	7		Granite Shoals	7		Meadowlakes	6		Wimberley	19
Smithville	7		Meadowlakes	7		Wimberley	6		La Grange	18
Granger	5		Schulenburg	7		Bee Cave	5		Llano	17
Granite Shoals	5		Blanco	6		Florence	5		Blanco	16
Liberty Hill	5		Dripping Springs	6		Mountain City	5		Meadowlakes	16
Rollingwood	5		Flatonia	6		Smithville	5		Smithville	16
Flatonia	4		Florence	6		Sunset Valley	5		Granite Shoals	15
Giddings	4		Johnson City	6		Dripping Springs	4		Liberty Hill	15
Johnson City	4		Jonestown	6		La Grange	4		Florence	14
Schulenburg	4		La Grange	6		Liberty Hill	4		Schulenburg	14
The Hills	4		Liberty Hill	6		Sunrise Beach Village	4		West Lake Hills	14
West Lake Hills	4		Llano	6		Volente	4		Dripping Springs	13
Wimberley	4		Rollingwood	6		West Lake Hills	4		Flatonia	13
Woodcreek	4		Sunset Valley	6		Flatonia	3		Granger	13
Bertram	3		Volente	6		Granger	3		Rollingwood	13
Blanco	3		West Lake Hills	6		Granite Shoals	3		Volente	13

Appendix 7 – Formulas Used to Calculate Percentages

Criteria Measured	*Formula for Calculating Percentages*
1. Does the city accept electronic reports and requests from constituents?	# Cities with email addresses / n
2. Has the city identified procedures to request public information online or by email?	# Cities with observed content / n
3. Does the city offer to satisfy public information requests by electronic means?	# Cities with observed content / n
4. Does the city have forms online?	# Cities having websites with observed content / n
5. Can any online forms be completed online?	# Cities with observed completable online forms / # cities with online forms
6. Do some online forms have to be downloaded, printed and mailed?	# Cities with observed print and mail online forms / # cities with online forms
7. Does the city website permit electronic payment for any fee or tax?	# Cities having websites with observed content / n
8. Does the city website accept credit card (and offline debit card) payment?	# Cities having websites with observed content / n
9. Does the city website accept online debit card payment?	# Cities having websites with observed content / n
10. Does the city website accept electronic funds transfer through the ACH?	# Cities having websites with observed content / n
11. Does the city claim an official website?	# Cities having websites with observed content / n
12. Is the city website situated in a public domain (.gov or .us)?	# Cities having websites with observed content / n
13. If the city has a website, does it provide at least one email address for general communications?	# Cities with observed content / # cities having websites
14. If the city does not have a website, does it have an email address for use in general communications?	# Cities with surveyed content / # cities not having websites
15. If the city has a website, does it post: Notices of Open Meetings, Adopted Budget, Annexation Plan, Notices of Annexation Hearings, and Notices of Property Tax Hearings, and Conflicts Disclosure Forms?	# Cities with observed content / # cities having websites
16. Does the have any other records and notices posted on its website?	# Cities with observed content / # cities having websites
17. Does the city participate in the Texas Comptroller CO-OP program (volume procurement allowing use of TxMAS and TxSmartBuy.com)?	# Cities having websites with observed content / n
18. If the city participates in CO-OP, does it use the Electronic State Business Daily (ESBD)?	# Cities having websites with observed content / n
19. Does the city website contain any electronic solicitations for bids?	# Cities having websites with observed content / # cities having websites
20. Did the city acknowledge receipt of the research introduction email?	# Cities with surveyed content / n
21. Did the city respond to the research introduction email by verifying its official website address, if any?	# Cities with surveyed content / n
22. Does the city have a Financial records and reports web page?	# Cities having websites with observed content / n
23. Does the city display its annual financial report (AFR) or certified AFR online?	# Cities having websites with observed content / n
24. Does the city display a Check/Expense register online?	# Cities having websites with observed content / n
25. Does the city website contain contact information or means (telephone or email) to contact elected officials?	# Cities having websites with observed content / # cities having websites
26. Does the city website provide audio or audiovisual streaming content of meetings?	# Cities having websites with observed content / # cities having websites
27. Does the city website contain public meeting agendas and minutes?	# Cities having websites with observed content / # cities having websites
28. Does the city website advertise an “official” presence on any social media site?	# Cities having websites with observed content / # cities having websites
29. Does the website allow officially monitored citizen exchanges with the city and one another?	# Cities having websites with observed content / # cities having websites
30. Does the city’s website offer distinct categories or views of content for different types of viewers?	# Cities having websites with observed content / # cities having websites
31. Does the city website offer Really Simple Syndication notification of newsfeed or content changes?	# Cities having websites with observed content / # cities having websites
32. Does the city website offer a “listserv” or other means of constituent registration for notification of new content in regard to a specific issue?	# Cities having websites with observed content / # cities having websites