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9-2017

E-GOVERNMENT AND CIVIC ENGAGEMENT IN SAN DIEGO COUNTY

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E-GOVERNMENT AND CIVIC ENGAGEMENT IN SAN DIEGO COUNTY

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A Project

Presented to the

Faculty of

California State University,

San Bernardino

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In Partial Fulfillment

of the Requirements for the Degree

Master of Public Administration

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by

Marcos Anthony Ybarra

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ABSTRACT

Due to technological advances, local city governments are relying heavily on websites and the Internet to connect with citizens. This project will discuss the relationship between e-government and civic engagement in San Diego county and its effectiveness. E-government is defined as the delivery of a city government's information and services to its citizens through its website. Civic engagement involves active participation from the citizens and is defined as the interaction between the city government and its citizens. This project will analyze the 18 city websites of San Diego county to determine the effectiveness of each city's website in providing e-government and civic engagement services. Each website will be rated and ranked, and a detailed recommendation on how the 5 lowest ranking cities can revise their websites to increase civic engagement will be provided. It will be shown that novel approaches such as online civic engagement, financial transparency, and personalized mobile apps not only enhance civic engagement in several city government websites but also receive positive user feedback and high resident satisfaction ratings.

ACKNOWLEDGEMENTS

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CHAPTER ONE

INTRODUCTION

"*In some respects, the e-government revolution has fallen short of its potential to transform service delivery and public trust in government. It does, however, have the possibility of enhancing democratic responsiveness and boosting beliefs that government is effective.*" -Dr. Darrell M. West

Overview

E-government has transformed civic engagement by improving the way citizens get information and their participation in local governance. Unfortunately, there is not a lot of analysis that explores the effectiveness of e-government in San Diego county. This research will look at specific determining factors that challenge the implementation of civic engagement. These factors will be studied as the basis of ranking the individual websites. The makeup of the factors will range on a variety of different perspectives. The data will display the discrepancies between the websites. However, the research will focus on the differentiating factors between the sites. The factors will be explored, documented, and presented either as enablers or barriers to civic engagement. Lastly, the project will also focus on identifying trends and relating them to the overall findings of the project.

A great deal has been written about e-government in general, and on a global scale, but not much has been written about San Diego county. Taking a closer look at e-government, in particular how well it is working outside of San Diego county is important for a number of reasons. Most transactions that are

taking place in the United States right now are done electronically. Most citizens have debit and credit cards, a cell phone, and Internet access. This means that many of the interactions that were previously done face-to-face in office visits are now done virtually or online. This project will take a closer look at how this development impacts citizens, as well as some other questions surrounding e-government. For example, are the goals of e-government actually meeting the needs of local constituents, or alienating them? What improvements can be made to websites to get citizens more involved?

This project is important because more research should be done on the efficacy of e-government, not just in theory but also in practice. It will add to the growing research on e-government that is ever evolving and shifting. Early scholars of e-government believed that it could revolutionize the way citizens engaged with their local politicians, and even their nation. But technology has rapidly advanced, and not all cities and countries have been able to keep up. As technology grows, it is important that e-government websites also keep up with the transitions. Part of the research in this project will take a look at what is missing with the lower scoring city websites. Are these cities failing due to outdated websites and a lack of user-friendly features, or are there other barriers? Even though the focus of the research is on San Diego county, the information, data, and results can be extended to other cities. Certainly, there are other cities that are struggling with civic engagement.

The basic research design is quantitative. By applying a formula developed by Dr. Darrell M. West, the lowest ranked cities are evaluated and the areas in need of improvement are tracked. Dr. West is vice president and director of governance studies at the Brookings Institution in Washington, DC. Previously, he was the John Hazen White Professor of Political Science and Public Policy and director of the Taubman Center for Public Policy at Brown University in Providence, Rhode Island. Dr. West has conducted a detailed analysis of 1,506 government websites in the 70 largest metropolitan areas. Base on his findings, he concluded that only a few cities take advantage of the interactive features of the Internet to facilitate communication between citizens and government agencies. Citizens who do not speak English or suffer from various kinds of physical handicaps are typically not assisted in navigating government websites. To assess how citizen feedback and governmental accountability can be enhanced, Dr. West developed several benchmarks to assess the city websites. I employ Dr. West's formula to benchmark the San Diego county websites. These benchmarking metrics and indices form a quantitative framework for assessment and ranking. Based on the application of Dr. West's formula, the data collected is analyzed and key steps are provided on how the 5 lowest scoring city websites of San Diego county can take to improve civic engagement as it relates to e-government.

No interaction with humans took place in this research. Rather, this research explores the efficacy of e-government websites of San Diego county.

As a result, the variations and limitations are different. For instance, the scoring of the websites does not happen over the course of a year, but rather on the one date that was applied using Dr. West's formula to that particular site. In addition, the research focused on the application of Dr. West's formula, and not other formulas that different scholars came up with. Unlike Dr. West's research, which focused on the assessment of the most populous metropolitan cities in the U.S., the scope of this research is restricted to the 18 cities in San Diego county. The population of some of these cities can be small. An interesting contribution of this research is that the distribution of the composite city scores is highly symmetric and can be modeled or predicted using the Normal distribution.

This project report is divided into 5 chapters. The first chapter introduces the subject of this project, defines key terms, and explains the importance of this research concerning e-government in San Diego county. The second chapter is the literature review. This chapter discusses the past and current research and scholarship that is relevant to e-government, detailing both the benefits of e-government and its shortcomings. Chapter 3 delves into the research perspective and design, variables, reviews the research questions, and data collection procedures. This chapter also describes the city websites as well as the validity and trustworthiness of the research. Chapter 4 describes the results of the procedures in chapter 3. Chapter 5 reviews the findings of the study and the top 5 recommended courses of action that the 5 lowest scoring cities can take. It also summarizes the entire project.

CHAPTER TWO

LITERATURE REVIEW

Introduction

In this literature review, current books and research articles that discuss the efficacy of e-government as it relates to civic engagement will be evaluated. Although there are several papers that discuss the benefits of e-government, articles that explore specific measures that counties and cities can take to improve civic engagement are scarce. In addition, virtually no research exists in detailing the barriers that some cities and counties face when it comes to e-government. The majority of literature that does exist on the subject, as seen below, details the theoretical benefits of technology, such as accessibility, greater transparency, and improvements in civic engagement with local and federal governments.

E-Government Perceptions: The Early Years

The term "electronic government" was introduced by the Clinton-Gore administration in 1993. Many people expected that the newly available Internet would become an integral part of the government of the future. At the end of the administration's second term, the United States led the world in progression toward e-government. According to the World Bank, "E-government is designed in a similar way as E-commerce and aims to make the interaction between government and citizens, government and business enterprises, and inter-

agency relationships more friendly, convenient, transparent, and inexpensive"
(World Bank, 2015). Later in the literature review, we will touch on the scholars
who address the results of running e-government from a business standpoint.

Norris and Reddick (2012) note that e-government would improve the
effectiveness and efficiency of government information and service delivery. It
would eventually integrate information and service delivery both within and
among governments, in the process transforming governments, improve relations
between governments and citizens, and ultimately, produce "electronic
democracy." Indeed, there were many benefits to switching from a more tedious
form of paper records to a digitalized medium. Electronic communication has
eliminated the prevalence of fax machines and other slow means of
communicating. Electronic record keeping also saves space. More importantly,
managing government records electronically will improve performance and
promote openness and accountability by better documenting agency actions and
decisions (The White House, 2011).

Fenwick et al. (2009) note the role of seamless communication within and
between government bodies. Since the 16th century, such communication
required a written document that is hand-delivered, mailed, or transmitted by
telegraph or cable. When word processors or computers or computers became
available, the report was again printed out and delivered by hand, mail, or
electronically by fax. With e-government, manual transmission of data becomes
unnecessary.

The Internet is obviously beneficial to e-government due to its ability to offer faster and more efficient communication. People from all around the world can now communicate with one another instantly, and citizens can often communicate directly with their local governments if the technological infrastructure is in place. For this reason, early scholars were hopeful about the possibilities surrounding e-government. Silcock (2001) advocates the use of advanced technology to make services more accessible and responsive through a single point of contact. With the availability of two-way consultation and collaboration, the citizen will lead the way, thereby enabling more efficient and transparent city governance.

The claims that there would be a "consumer-led revolution" were bold and a bit premature. However, much of the early academic articles on e-government supported this positive spin. Fenwick et al. (2009) note that many could not contain their enthusiasm. The possibilities for convenience, enormous cost savings, and improved living standards also generated significant excitement. At the beginning, knowledgeable participants assumed that the impact of information technology would reach the instrumentalities of society's governance and that government. Recently, Internet-based information technologies have become indispensable in civic reform efforts. Local governments have made information from legislative meeting minutes available to the public, including budget proposals.

According to the International Budget Partnership (IBP, 2010),

governments can publish all budget information online and invite public

participation in the budget process. With e-government, the key benefit is that

such transparency and accountability can be implemented quickly and with very

little additional cost or effort. Thus, e-government does have the potential to

radically shift public perceptions of political systems. It offers a financially-

responsible way for governments to communicate with their constituents.

Kavanaugh et al. (2010) affirm this, saying that it has been proven that

leadership in the local government can be strengthened when citizens can

engage in discussions with governing councils.

E-Government and Fiscal Transparency

Martin (2008) notes that for a long time, the public did not have much

access to federal court records that are held in electronic format. Martin stated

that with the increased pervasiveness of e-government, people can easily have

access to court records and proceedings. For example, the Public Access to

Court Electronic Records (PACER) system has allowed citizens to access courts

records in a faster, better, and cheaper way. Martin also notes the benefits of this

system on the county as a whole, for citizens are now able to easily follow-up on

court cases and other matters of the judicial system. Bertot (2010) notes how

leadership has been strengthened because of the accountability provided by

citizen engagement. For example, citizens can now question some of the actions

taken by their local governments. It has also provided a ground space where citizens can express their views on development projects.

The local government is the primary service provider that needs to have direct contact with the citizens to be effective. Merwin (2012) notes some of the successes the local government has achieved through the transformation of e-government. For example, e-government has opened lines of communication between governments and their constituents using many different formats, such as email, complaint and comment sections, social media, and applications for mobile devices. Local municipalities provide services such as water, electricity, housing, healthcare, and other vital services. The city government requires having direct connections with both the state government and the citizens it is serving. Merwin highlights that the invention and implementation of Web 2.0 has led to the successful governance of the City of San Diego. This Web portal has shortened the distance between the citizens and political and administrative leadership. This increase in public participation has paved the way for better projects. Most citizens are active in these websites created by the local municipal government. This has led to changes in the service provision sector, supported by the use of proper channels designed for communication between authorities and residents (Shen, 2014). Consequently, notable improvements in service provision have increased the trust and confidence people have in the local government.

Reddick (2006) analyzes how e-government has facilitated transactions and service delivery. It begins by highlighting how e-government has created more channels to convey necessary information. This has made it easy for citizens to obtain information quickly from the Internet. It also provides a convenient mode of transaction between the local municipality and community.

Jimenez (2011) notes the need to customize information. He states that mechanisms need to be adopted to ensure important that email alerts are received by every registered citizen in a given city. He also mentions the benefits of creating forums on social media. These sites are convenient and provide easy access because most people already have accounts of their own accord. Most people will, therefore, have access to written information and visual content. He also points out that many government websites only support one-way communication. There is a need to upgrade this system into two-way communication to improve civic engagement. The overall impact is that such customization of information may increase citizens' participation.

Schlozman (2010) notes the need to make improvements to enhance e-government. To allow every citizen the opportunity to get involved in the governing process, the local government should ensure that each individual has access to the Internet and can get information on the Web. This article states that currently, most individuals have little access to information via the Internet because government websites are less advanced and cannot be used to convey

information. He proposes that governments adopt mechanisms to ensure that every citizen participates in political discussions.

<u>E-Government, Social Capital, and Civic Engagement</u>

According to the *Encyclopedia of Political Science*, the definition of social capital is somewhat ambiguous, but an accepted definition is that it is the connections among individuals, the social networks, and norms of reciprocity and trust that arise from them. It is sometimes referred to as the glue that holds society together and related to social cohesion in general. We might ask: Why use the term capital? It is used frequently in social science to refer to properties that can be reproduced or augmented and represent an investment of some kind. Hence, social capital, like financial capital or human capital, represents a resource, in this case one held by social groups or within social networks. Social capital offers access to resources and valued collective outcomes that would be unattainable or too costly for individuals to access. An example would be that of blood donation, whereby the individuals freely donate their blood, which then becomes a collective asset for the community. As modern technology has advanced, our concept of social groups and social networks has shifted. The market has become flooded with smartphones, which gives more people access to the Internet. Thus, many of our social interactions exist in virtual reality.

Some articles have encouraged the application of e-government on civic engagement. (Lean, 2009) notes that the world today depends on the Internet for almost all interactions. This has brought about the need for more civic

engagement using technology. This article also highlights the need to restore the lost trust among the citizens on the leadership. To restore lost confidence, the local government must create websites where residents can express their views through discussions and monitor progress.

E-governments can heavily impact civic engagement. Tolbert (2006) highlights improving trust and confidence by way of e-government. Over the last three decades, trust in the government has decreased significantly. Advancement of e-government has recently restored peoples' trust. As we shall see in Chapter 4, e-government easily influences the attitude of citizens because it provides the convenience of uploading feedback. Since government progress can be monitored easily, trust and confidence among citizens have improved.

Mossberger (2008) notes e-government has contributed to digital citizenship. In simple terms, digital citizenship refers to the appropriate and responsible use of technology. By introducing and enhancing e-government, citizens have embraced the opportunity to use technology to gather information. It states that people have seen fruitful political discussions and engagement, which has led to the evolution of politics, through using websites such as Web 2.0. This has resulted in things like higher voter turnout. Through e-government, voters are persuaded to participate in the voting process, which has led to a more open democracy. Additionally, there has been increased one-on-one engagement between politicians and citizens.

Nextdoor.com is a private social network that has improved civic engagement. The online platform allows neighbors to build stronger and safer communities by creating a virtual watch program that encourages neighborhood interaction. Residents can communicate face-to-face or online, and this increased communication deters criminal activity in a community. Not only can residents organize community watch groups quickly, they can also track down trustworthy babysitters, sell goods, report a lost dog, and much more. Additionally, the city can also provide residents with important city safety updates, emergency notifications, news, services and programs in specific neighborhoods. The San Diego Police Department has successfully used Nextdoor for nearly two years and reported that participation in neighborhood watch groups increased more than 500 percent during that period (City of San Diego, 2015).

There are many benefits of e-government, as the scholars have noted. Many of the benefits are practical solutions to engaging citizens with their local and federal governments. They provide citizens the ability to communicate directly, and can save the city money and resources. According to Fenwick et al. (2009), "without e-government, society risks the near certainty that the transaction costs of governance will rise to a level that precludes democratic governance. The number, speed, and complexity of economic and social transactions have, and will continue, to increase at a rate that outstrips the

capacity of government to analyze and utilize the information necessary to maintain and facilitate a civil society."

<u>Critiques of e-Government</u>

Many scholars supported e-government in both the early and later years, but other scholars have remained critical. The amount of literature criticizing e-government has grown from small to sizeable, though the majority of this literature has focused on studies outside of the United States. Norris and Reddick (2012) collected a large amount of empirical data and "found e-government mainly to involve the delivery of information and service, not e-democracy or transformation." This directly contradicts some of the earlier optimistic scholarship reviewed, such as *Parliamentary Affairs*, a British journal. Similarly, Reitz (2006) states that "while the computer and the Internet can facilitate the sending of communications between citizen and government officials, they do nothing to ensure real communication and deliberation, to ensure, for example, that government officials will take public comments into account in formulating policy." This is to say that communicating basic information and transactional exchanges are more convenient due to e-government, but that does not ensure that government officials engage directly with citizens about their concerns or their needs.

Another issue surrounding e-government concerns the security and privacy of citizens. While e-government does make certain processes easier— filing taxes, registering to vote, online filing of court documents, and applying for

loans—the risk still exists of leaking personal information, which could result in this information being stolen or shared with unintended parties. Any time citizens share sensitive information with the government, they trust that their information will be secure and protected. However, the exchange of this information does not guarantee that it would not be shared with a third party, and a security breach is always within the realm of possibilities (Kambas, 2005). Fenwick et al. (2009) note that e-government is susceptible to privacy and security breaches, including consumer identity theft, corporate security breaches, and other intentional and accidental violations of privacy. E-government will need to protect citizen data and relax federal restrictions on governmental use of such data."

To maintain a well-functioning e-government system, it also remains crucial that governments maintain Web accessibility. The Web Content Accessibility Guidelines (WCAG) is considered as the worldwide reference technical standard for Web accessibility. According to Velleman et al. (2015), WGAG addresses multimedia content, interactive components, and rich and mobile web applications. The UN Convention on the Rights of People with Disabilities recognizes the importance of online accessibility. Such accessibility forms the backbone of the modern information society. However, though these standards have been available to webmasters for years, most municipality websites have failed to adopt them. This excludes a significant portion of the population in the United States and worldwide, due to the fact that people with disabilities do not have the necessary tools to engage and utilize e-government

(Velleman et al., 2015). Bowman et al. (2007) defines adoption as "the phase of investigation, research, consideration and decision making to introduce an innovation in the organization." In this case, adoption is the integration of accessibility. Matching or sharing information within and between agencies introduces yet more barriers.

The Computer Matching Act is an important procedural framework of notice to individuals (Fenwick et al, 2009). To comply with the Act, computer matching takes place under the "routine use" exception to the Privacy Act's limitation on use of personal information. Before matching can take place, government agencies are required to enter into written, inter-agency agreements specifying a cost-benefit analysis of the match. Unfortunately, most federal agencies either ignore the law or interpret it to suit their own bureaucratic convenience, thereby compromising the privacy interests that the law was designed to protect. As a result, it is unclear whether computer matching is a cost-effective technique for preventing fraud, waste, and abuse. An overarching issue is whether agencies can provide accountability of their own operations.

The local government in San Diego should work harder to ensure a legal framework exists to promote user privacy and to eliminate any possibility of misuse of data (Mossberger, 2010). Individuals who lack confidence in the system in practice doubt the confidentiality of their data. When private information is required, people are less likely to participate in political discussions. Citizens question the government's ability to provide strict and safe

policy for their data on the web. Mossberger proposes the need to improve security measures and to assure people that the information provided is safe and not prone to misuse by unauthorized personnel.

The government in San Diego needs to adopt improved online systems. Though citizens increasingly utilize Web systems (Hui, 2010), this increase has led to some challenges. For example, managers are faced with problems responding to the demand for services of better quality. To solve these difficulties, governments should implement more integrated websites. Websites that can run smoothly despite the growing demand encourage people to trust the system and participate in discussions. E-government and Web 2.0 will have to continue evolving technologically so that more citizens feel confident when using the system.

Verdegem (2009) focuses on San Diego's need to adopt a better model of enhanced e-government. The writer notes how the implementation of new technologies provides the government with opportunities to deliver more efficient services to citizens. He proposes implementing more user-oriented models to improve the current systems. These user-friendly models should be simple to use, efficient, and convenient. The adopted model should also provide methods of evaluating user satisfaction and assessing the impact that services have on citizens. By adopting these necessary changes, e-governments can promote civic engagement.

Overall, there are both pros and cons to utilizing e-government, and scholars still dispute whether or not e-government will lead to some sort of revolution. At this current point in time, there are too many barriers preventing a fluid dialogue between governments and their citizens on web platforms. There are also issues with privacy, security, system-to-system incompatibility, security and privacy, and accessibility. Many e-governments have not updated their systems to be accessible to people with disabilities. In addition, there may be other barriers that have not been covered in current research on e-government. For example, there may be barriers that add to the digital divide (such as those who have ready access to computers and know how to use them, and those who do not) or make things difficult or impossible to access (such as language barriers). There is a rich community of immigrants living in San Diego from Sudan, Somalia, Iraq, Syria, Mexico, Vietnam, Korea, El Salvador, and more, who may not be able to navigate the Internet in English. In the following chapters, this language barrier will be used as a key metric when evaluating website accessibility of different cities in the San Diego county.

CHAPTER THREE

RESEARCH METHODOLOGY AND DATA COLLECTION

Introduction

This chapter delineates the methods used to gather the information needed for this project. It provides a more detailed description of Dr. West's formula and explains the scoring system he used to rate the 18 cities in San Diego county. This chapter will define benchmarking and the benefits that it can have on strengthening e-government. The steps it took to collect the data are described, including any materials used, the websites, and the reasons for focusing on the lowest scoring cities. In addition to this, the research design and the experience of navigating city websites will be discussed.

<u>Research Perspective</u>

Dr. West's benchmarks have been utilized to rate all 18 city websites in San Diego county. By applying this data, specific steps that the lowest scoring cities can take to improve e-government are proposed. For this project, a quantitative method is employed. The recommendations for the lowest scoring cities are directly related to their particular low scores in certain categories. For instance, if there is no Spanish language option on an e-government city website that has a large immigrant Latino population, it can be concluded that the city is not serving the needs of all of its community members. In addition to

benchmarking, the city of San Diego's e-government website will be closely examined.

In order to understand why benchmarking is important, one must understand its definition and benefits. Benchmarking is the process of comparing two or more entities using a consistent set of metrics or indicators. Rorissa et al. (2011), "Benchmarking indices and indicators are generally quantitative in nature, and collectively form a framework for assessment and ranking. Some frameworks are based on measurable characteristics of the entities; others use one or more subjective measures; a few employ a combination of both." Benchmarking has long been used to evaluate and improve businesses. The first benchmarking activity was conducted at Xerox, leading to the adoption of processes that helped the company lower costs and improve performance. In this paper, the benchmarking method that Dr. West formulated in 2001 (West, 2001) to evaluate e-government websites is adopted. Although this formula is over a decade old, scholars still use it to measure the successes and failings of local and international e-governments.

Some key benefits of benchmarking are listed as follows:
(1)   to measure retrospective achievement (which helps policymakers compare how their country or agency ranks in terms of e-government);
(2)   to chart prospective direction/priorities (which policymakers can use to make strategic decisions and identify appropriate courses of action) and to measure e-government progress/development;

(3)   to ensure accountability in governments and their agencies when investing

in e-government.

<u>Research Design</u>

We rated the 18 cities using Dr. West's formula, which he describes as

follows (West, 2001): "We created a 0 to 100 point e-government index and

applied it to each city's website based on the availability of contact information,

publications, databases, portals, and a number of online services. Four points

were awarded to each website for the presence of each of the following 22

features: phone contact information, addresses, publications, databases, links to

other sites, audio clips, video clips, foreign language access, not having ads, not

having user fees, disability access, having privacy policies, security policies, an

index, allowing digital signatures on transactions, an option to pay via credit

cards, email contact information, search capabilities, areas to post comments,

broadcasts of events, option for email updates, and personalization. These

features provided a maximum of 88 points for each particular website."

Additionally, each site qualifies for a bonus of 6 points if linked to a portal

site (example: being linked to county website), and another 6 points based on the

number of online services users were able to access via the website (one point

for one service, two points for two services, and so on). It is important to keep in

mind that the definition of online services includes only those services that are

fully executable online. If a citizen had to print out a form and mail or take it to a

government agency to execute the service, that is not counted as an online

service. The e-government index therefore runs along a scale, from 0 (having none of these features and no portal or online services) to 100 (having all 22 features, a portal, and up to 6 online services).

Research Questions

After analyzing the data provided, key methods for improving civic engagement will be developed for the 5 lowest scoring cities of San Diego county, that can increase civic engagement. The following research questions were proposed:

1)   What is the relationship between e-government and civic engagement?

2)   What are the results of applying Dr. West's formula to the 18 cities of San Diego?

3)   Can the distribution of the composite scores be modeled and predicted?

4)   Which cities are the lowest scoring and why?

5)   Based on the areas in which the 5 lowest cities scored poorly, what recommendations can be made to improve civic engagement?

6)   Are there any overall trends in low-scoring e-government websites?

Subjects and Units of Analysis

This research does not involve individual people. The subjects and units of analysis are the 18 different e-government websites in the San Diego county. More specifically, Dr. West's formula has been applied to the following cities: Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido,

Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista.

<u>Research Variables</u>

As stated earlier, although much has been written about e-government in the United States and globally, few articles discussing the effectiveness of e-government in San Diego exist. For this reason, it is important to study the successes and failures of e-government in San Diego and its different cities. To this end, 24 criteria have been identified to assess the city websites. These criteria are the statistical variables and will be covered in greater detail in Chapter 4. The City of San Diego has one of the highest rated e-government websites in the nation and has an excellent record of civic engagement. Therefore, this city's website is used as a model and fixed variable (reference) to compare the e-government websites of the lowest scoring cities within San Diego county.

<u>Data Collection Procedures</u>

The 18 city websites were identified through Google. Each website is carefully reviewed and the data generated by applying Dr. West's formula to the 18 cities in San Diego county is described in detail in the research design section. The data is tracked and inputted into an Excel spreadsheet.

<u>Setting and Environment</u>

Most of the research is conducted online. To give a greater sense of the setting and environment of these virtual experiences, a description of each city's websites is provided.

<u>Description of City Websites</u>

We first evaluate the top 13 websites and then assess the bottom 5. The 5 lowest-ranking websites will receive more attention. Most of the 18 websites listed the local government office's address and contact information on the main homepage, but some websites required that the user click on a link in order to obtain this information. None of the websites charged user fees nor contained advertisements. Some of the websites possessed user-friendly interfaces that improved navigation, but other websites were time-consuming to navigate. For example, some websites utilized PDF files to present information and displayed obscure icons and links. In general, most websites did not contain audio or video clips and did not permit user personalization. Almost all of the websites lacked security policies and accessibility for disabled users.

<u>Top Thirteen San Diego County Websites</u>

In this section, initial impressions of the top San Diego county city websites are described briefly. In the following results chapter, specific areas in which each website scored highest will be described. In addition, recommendations for websites that scored lowest will be provided.

<u>Carlsbad.</u> This website has catchy, easy-to-identify icons and quick links that allow users to step through the website. The site displays the dates and times of government-related events in an organized manner. Unlike many other websites, Carlsbad follows the requirements of Title II of the Americans with Disabilities Act (ADA). It is the only website that has an alphabetical index. The

website allows links to be personalized according to the user's preferences and interest. The Carlsbad website also streams live city council meetings for citizens. Users can follow their government departments on social media to stay updated on local issues. The website also provides abundant information on how to pay various city fees. Citizens can apply online for everything from affordable housing to building permits. Unfortunately, there is no address or phone number on the main homepage. http://www.carlsbadca.gov

Chula Vista. Chula Vista's captivating and professionally designed website displays nice graphics and captions. This is one of the few websites that provides a visual calendar of events. Citizens can put in work requests online for pothole repairs, reports on dead animals, abandoned vehicles and more, and they can easily pay fees with a credit card. A detailed city services link contains information on everything from applying to jobs to paying fines. There is no Spanish translation of this webpage, which is a concern since Chula Vista is so close to Tijuana. This website also does not make things easily accessible for people with disabilities. http://www.chulavistaca.gov

Del Mar. Del Mar's well-designed and detailed website gives citizens access to information about city projects, public works, and clean water programs. The website offers information on public meetings and provides the option to watch meetings live and on-demand. The website allows citizens to pay utility bills online using a credit or debit card. The city also provides a beach camera that allows people to check surf conditions, but this service is limited to

only a select few beaches. There is no language translation available.
http://www.delmar.ca.us

El Cajon. While El Cajon's website is simple and functional, it contains no images to attract visitors. However, it does have a "most searched" quick link. This website boasts many features, such as live-streaming of city council meetings, and allows on-line bill pay. However, they do not list their address or phone number on the main homepage. The website does place heavy emphasis on transparency, and city council minutes are available for citizens to download. There is no language translation available. Citizens are able to apply for local jobs, housing assistance, and building permits through the website. https://www.ci.el-cajon.ca.us

Encinitas. Encinitas' visually appealing website effectively streamlines information, but has surprisingly few background images. The website does contain a link to an external civic engagement website. It also contains webcasts and video and audio clips of city council meetings. Records are easy to locate, which provides an efficient level of transparency. The website provides a link to Google Translate to aid deaf citizens, but the accuracy and effectiveness of this translation tool remains unclear. http://www.ci.encinitas.ca.us

Escondido. The simple, narrow, and long Escondido website contains no pull-down menus. The website overloads its homepage with listed links, making it difficult to navigate the 23 different clickable options. Users must scroll down several times to locate some links. It has only one video clip, which was posted

on YouTube and has currently only garnered 96 clicks.

https://www.escondido.org

Imperial Beach. While the Imperial Beach website does lack visual appeal, it does offer some useful online services. For example, citizens have access to agendas and can pay licenses and other fees online (though it seems to only accept Paypal). The website lists an address but no phone number on the homepage. Accessibility features or Spanish language translation are not available. http://www.imperialbeachca.gov

La Mesa. La Mesa displays a beneficial weekly calendar on its homepage, but it does not list an address or phone number. However, citizens are able to pay for fees or licenses via credit card. There are some dead links in this website and translation or accessibility features are not provided. www.cityoflamesa.com

National City. This website does have features for Spanish language translation options, but offers no additional languages. It has an OpenGov financial transparency portal, which contains clear Web-based reports. www.nationalcityca.gov

Oceanside. This website uses the space of the full screen and ranks popular links. It also displays an appealing photo gallery. There is a mobile app to request one of the many services provided. https://www.ci.oceanside.ca.us

Poway. Poway's website displays top news stories on their homepage and provides a staff directory. They accept credit card payments by phone or via an

online system. They do not list contact information on the main homepage. http://poway.org

San Diego. The award winning City of San Diego website (Best of the Web 2016 winner) provides accessibility options and multiple language translation. There are nice images with captions. It possesses a "Get It Done" app that allows users to submit requests and view reports. There is a city TV channel. Users are able to click on a feedback tab on main homepage. There are many online payment and application services. Additionally, it provides interactive budget reports. https://www.sandiego.gov

San Marcos. San Marcos' visually appealing website displays catchy and easy-to-navigate icons with its links. It also contains a local TV channel. They allow online payments. http://www.san-marcos.net

Important Highlights of Thirteen Highest-Ranking Websites

By evaluating these 13 websites, the following features have been identified as key components of an effective e-government website. They are civic engagement website, OpenGov financial transparency portal, mobile app for user service requests and city feedback reports, and personalized links. Having a separate website for civic engagement encourages residents to participate in local issues. This can be enhanced using a smartphone app, which can be considered a mobile form of civic engagement, allowing residents to communicate with the city while on the go. A financial transparency portal allows residents to view the city expenses and provide feedback on budget issues.

Finally, personalized links allow the resident to view specific links that are of

personal interest and in the process, allows quick access to these links.

Five Lowest-Scoring Websites

The lowest scoring websites are evaluated as follows.

Santee. This website's simple layout feels antiquated. Static and

uninteresting pictures are recycled periodically with no captions. There are also

no background images. Half of each webpage is not utilized, leading to a narrow

page of information with very small words and loads of dead space. Some of the

pull-down menus contain far too many items, preventing quick navigation. The

items on the pull-down menu are also replicated in the left column and each item

leads to one page of information. There are some dead links. No advanced

website features or online services exist. It does not have a calendar of events,

nor does it allow users to sign up for updates. http://www.ci.santee.ca.us

Solano Beach. The Solano Beach website contains static pictures with no

captions but has a nice background image. The webpage utilizes the full screen.

Some of the links lead to PDF files, which require the user to hit the back button

after reading the PDF file. These files should have been converted to webpages.

http://www.ci.solana-beach.ca.us

Vista. The website contains static pictures with captions and background

images. The webpage utilizes two-thirds of the full screen, but contains no site

map. Some of the links provide several PDF files so the users must hit the back

button after reading each page. These files should have been converted to

webpages. No search capabilities or online services are available.

http://www.cityofvista.com

Lemon Grove. This website has a background image with three dull pictures that contain no captions. Loading relatively simple pages takes far more time than necessary. The only available online payments are print-based. http://www.lemongrove.ca.gov

Coronado. This website is more engaging than the previous four, utilizes the full screen, contains nice large background images, and offers links to a simple app that allows users to submit service requests. It also has a TV channel. However, it lacks foreign language access (an important feature since many international visitors visit the island every year) and online services (only one service). https://www.coronado.ca.us

Validity, Trustworthiness, and Bias

One issue must be stated to address terms of validity, trustworthiness and bias: Even though many scholars of e-government laud Dr. West's framework, his measurement is static and does not account for changes in design. Where websites were once merely containers of information, they have not become "fully integrated portals" (Rorisa et al., 2011). Multiple frameworks or formulas from other scholars of e-government were not included. A longer study be would prove more beneficial than a short-term, one-time study. Although this study does have its limitations, it is the first study that focuses on what cities in San Diego county can do to improve their e-government websites. This study is

important because politicians, policy makers, and other government officials rely on websites to engage citizens. A study that rates the lowest scoring cities and offers solutions for improving e-government can inspire more comprehensive reform in the future.

Summary

In this chapter, the research perspective and a more detailed explanation of Dr. West's formula is provided, including research design and questions. An overview of the 18 city websites is also provided, together with brief descriptions of the navigation experience for each website. Some of the limitations of this study were also addressed. In the next chapter, discussion will focus more on the lowest scoring cities in San Diego county. By comparing these cities to the City of San Diego website and using the data collected, recommendations for improvement are described.

CHAPTER FOUR

FINDINGS AND RESULTS

Introduction

In the literature review chapter, the City of San Diego provided evidence that by creating a social website such as Nextdoor.com, the local government can instill trust and confidence where residents can express their views through online discussions and monitor the progress being made. However, as pointed out in the conclusions of that chapter, the local government website has to provide a superior user-experience and has to be designed professionally with key features that maximize civic engagement. In this chapter, we have identified 24 criteria necessary to achieve this goal and applied these statistical variables to the 18 city websites in San Diego county. The cities are then ranked by totaling the scores and a statistical analysis of the frequency distribution of the composite scores is provided. By further assessing the results, we narrow down the 24 criteria to several novel online features for effective e-government. They include online civic engagement, financial transparency, and personalized mobile apps. We will show that these approaches can improve the bottom 5 e-government websites and promote civic engagement.

Research Objectives

The aim of this research is to encourage city governments in San Diego county to revise their websites to increase civic engagement. To this end, we

assess the current design of the 18 city websites in San Diego county and select the best features from the top 13. We then give a detailed recommendation to the bottom 5 cities on how they can revise their websites. We use website examples from Encinitas, City of San Diego, and other cities to show that these changes have increased civic and financial engagement as well as resident satisfaction in San Diego county.

<u>General Website Design Considerations</u>

An effective government website allows users to find information quickly and in a logical fashion, and provides good user experience. Ultimately, a combination of great content and presentation leads to an effective design. A checklist of design factors is listed as follows:

• Will visitors visit the content the city wants them to visit?

• Do users see important information in the correct location on the website?

• Is the website engaging to prevent users from leaving quickly?

• Are the navigation and action items intuitive?

• Is the website taking a long time to move from one webpage to another?

• Is the user being directed to each section in a logical manner?

Google Analytics is a popular analytics tool that can be used to assess the performance of each webpage in a website. It is easy to install and offers plenty of user and content data to help website administrators learn more about webpage performance. It has a feature called site overlay, which gives a visual representation of the popular places users tend to click on. It also offers data on

bounce rates and top exit pages that make users leave. These tools help the administrator troubleshoot and optimize webpage layout.

Sample Space and Participating Cities

The sample space consists of 18 cities that are listed in alphabetical order in Tables 1 and 2. The sample is unbiased since all cities in San Diego county are included. These cities are assessed according to 24 criteria, which can be broadly classified under city interaction, website usability, program relevance, and confidentiality. These criteria correspond to the statistical variables. For the first 22 criteria, each website is given 4 points for meeting each criterion and no points if they do not. The remaining two criteria are bonus criteria, where each website is given 6 points for a city government portal and 1 point for each online service (up to a maximum of 6 points). Thus, the maximum possible score is 100. The composite scores for each website are also listed in the tables.

Table 1. Ranking First 9 San Diego Cities.

#	Criteria	Carlsbad	Chula Vista	Coronado	Del Mar	El Cajon	Encinitas	Escondido	Imperial Beach	La Mesa
1	phone contact	4	4	4	4	4	4	4	4	4
2	addresses	4	4	4	4	4	4	4	4	4
3	publications									
4	databases									
5	links to other sites	4	4	4	4	4	4	4	4	4
6	audio clips						4			
7	video clips	4		TVC		4	4			
8	foreign language access	4	4			4	4	4		
9	not having ads	4	4	4	4	4	4	4	4	4
10	not having user fees	4	4	4	4	4	4	4	4	4
11	disability access	4			4		4			
12	having privacy policies	4	4					4		
13	security policies									
14	an index	4	SM		SM	SM		SM	SM	SM
15	digital signatures on transactions									
16	payment via credit cards		4		4	4			4	4
17	email contact info	4	4	4	4		4	4	4	4

#	Criteria									
18	search capabilities	4	4	4	4	4	4	4	4	4
19	areas to post comments	4					4		4	
20	broadcasts of events	4	4	4	4	4	4	4	4	4
21	option for email updates	4	4	4	4	4	4	4	4	4
22	Personalization	4								
23	Linked to portal		6		6	4				
24	Online services	1	1	1	1	1			4	1
	TOTAL	65	55	37	51	45	56	44	48	41

SM: Site map. TVC: TV Channel.

Table 2. Ranking Final 9 San Diego Cities.

#	Criteria	Lemon Grove	National City	Oceanside	Poway	San Diego	San Marcos	Santee	Solana Beach	Vista
1	phone contact	4	4	4	4	4	4	4	4	4
2	addresses	4	4	4	4	4	4	4	4	4
3	publications					4				
4	databases					4				
5	links to other sites	4	4	4	4	4	4		4	4
6	audio clips									
7	video clips					TVC	TVC			
8	foreign language access	4	4	4		4	4			4
9	not having ads	4	4	4	4	4	4	4	4	4
10	not having user fees	4	4	4	4	4	4	4	4	4
11	disability access									
12	having privacy policies				4	4	4			
13	security policies									
14	an index	SM		SM	SM	SM	SM	SM	SM	
15	digital signatures on transactions									
16	payment via credit cards			4	4	4	4			
17	email contact info		4	4	4	4	4			4
18	search capabilities	4	4	4	4	4	4	4	4	
19	areas to post comments					4				
20	broadcasts of events	4	4	4	4	4	4		4	4
21	option for email updates	4	4	4	4	4	4		4	4
22	Personalization									
23	Linked to portal		6			6				
24	Online services			4	1	4				
	TOTAL	36	46	48	45	70	48	20	36	36

SM: Site map. TVC: TV Channel.

The frequency distribution of the composite scores is shown in Figure 1. The average and the standard deviation are two key parameters that can be used to model the frequency distribution. In this case, the average composite score is 45.94 and the standard deviation is 11.49. The average (arithmetic mean) is computed by taking the sum of scores (sample values) divided by the total number of values in the sample space. The standard deviation is used to quantify the amount of variation or dispersion of a set of scores from the mean. It is computed by first taking the average of the sum of squared differences between the score and the mean, and then taking the square root.

As shown in Figure 1, the distribution is highly symmetric even though the sample size is small. This suggests that the frequency distribution can be compared to the Normal distribution, which also has a symmetric bell-shaped characteristic. Since the two distributions are closely matched, the Normal distribution can be used to model or predict the frequency distribution of another sample space, such as the cities in a different county. This is more convenient than computing the frequency distribution for every county. From this frequency distribution, we extract the cities with the bottom 5 scores and provide recommendations on how they can improve their websites for civic engagement.
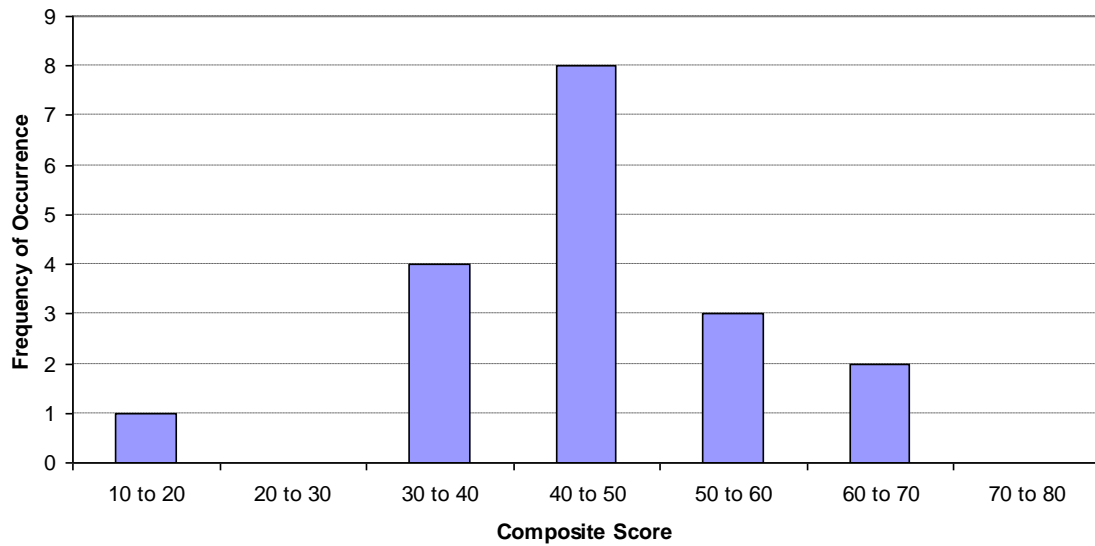
Figure 1. Frequency Distribution of Composite Scores.

Discussion of Findings

The majority of city websites provide information on city news, projects under development, building and engineering, environmental programs, fire, graffiti removal, housing, library, online services, parks and recreation, permits, planning, police, programs for senior adults, sewage, street maintenance, trash collection and recycling, and water services. While basic features such as how the website look and feel like are important, novel features are also highlighted and they will be further assessed in the sections to follow.

Website usability features are the baseline for e-government. However, more advanced features involving two-way interaction are required for civic engagement. Features such as dedicated TV channels may provide real-time

information, but they only allow one-way dissemination of information and are therefore not suited for civic engagement involving public discussions. Features such as online payments provide residents with both convenience and an opportunity to interact with the city's website. This is a step in the right direction. To encourage diverse views, the website should also provide translation services. About half of the San Diego county websites do not provide foreign language access and some websites only provide Spanish translation but no other languages. However, the top city websites provide novel features that have the potential to support effective civic engagement. These features are highlighted as follows and details are covered in the following sections:

- Civic engagement website;

- OpenGov financial transparency portal;

- Mobile civic engagement using apps for user service requests and city feedback reports;

- Personalized links.

Encinitas Online Civic Engagement. Encinitas has launched e-Town Hall, an online forum that allows citizens to offer comments and ask questions, participate in polls and visioning exercises, exchange ideas and share photos or documents for consideration, get the latest notifications, stay up-to-date, and join discussions to contribute opinions or solutions. The cloud-based platform is powered by Peak Democracy, a non-partisan company that aims to broaden civic engagement and build public trust in government. This online system is currently

used by more than 80 government agencies across the nation, and the City of

Encinitas is the first in San Diego county to use it. The company has launched

almost 4,000 forums with over 600,000 individuals participating. User satisfaction

rating is over 92%. The e-Town Hall platform is part of a one-year pilot program,

and city staff plans to use it for a variety of topics and projects. The new forum

was launched with city staff asking the public to participate in a poll that asks:

"How important is it for off-leash dog hours to remain at Encinitas Viewpoint,

Orpheus, and Sun Vista Parks once the new dedicated two-acre off-leash dog

park is open at Encinitas Community Park?"

   PlaceSpeak is the City of Encinitas' new online consultation platform. This

new system will make it easier to receive public feedback on a variety of issues.

Registration is free and privacy is protected. Only one registration is required to

participate in a number of public consultations and questions. Feedback is

uploaded on the website instead of on social media to ensure resident comments

are received. To make using PlaceSpeak as easy and convenient as possible,

the City of Encinitas has not activated any authentication features, but a resident

can choose to verify the location of his/her home or workplace, which is required

to participate in future consultations. The homepage of PlaceSpeak is shown in

Figure 2. As can be seen, users can participate in discussions and polls,

download resources (such as a database of photos of interesting places), and

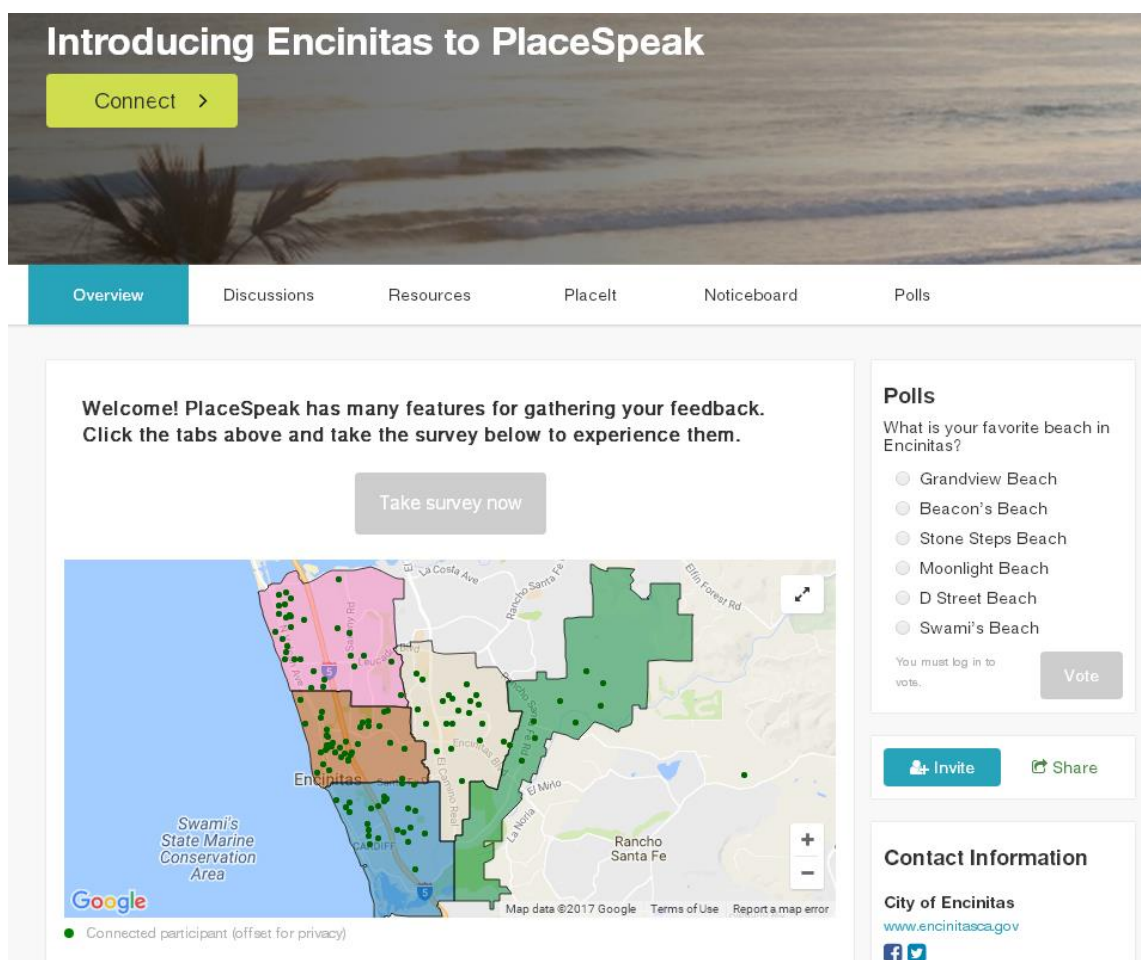access PlaceIt (to indicate favorite places using an interactive map), and a

noticeboard.

Figure 2. PlaceSpeak Homepage (PlaceSpeak, 2017), from

https://www.placespeak.com/en/topic/4630-introducing-encinitas-to-

placespeak/#/overview.

Financial Transparency Portal. While many cities have shown commitment

to financial transparency by posting financial documents on their websites (such

as operating budgets), residents may require additional information. That

information is most easily understood through interactive charts and graphs. In

an effort to enhance transparency in financial reporting, only two cities in San

Diego county—San Diego and National City—are offering an interactive reporting

tool using the Financial Transparency Portal. This allows residents to explore

budget data online in various graphical formats selected by the user. They both

employ the OpenGov portal, an online application pioneered by OpenGov, a

California-based company specializing in financial transparency. These two cities

use the same platform to provide actual historical budget data from Fiscal Year

2010 to the current Fiscal Year (2018) for public review. This has helped

strengthen the connection between the local government and community

members.

The website has generated almost 2,000 likes. Each financial spreadsheet

can be displayed using different types of presentational charts. Some of the

illustrations accompanying the column chart, pie charts, and line graph are

shown in Figures 3, 4, and 5. The charts and graph are interactive. When a user

clicks on one of the items on the right, the affected columns or sectors present

numerical figures. For a more detailed assessment, the user can select an

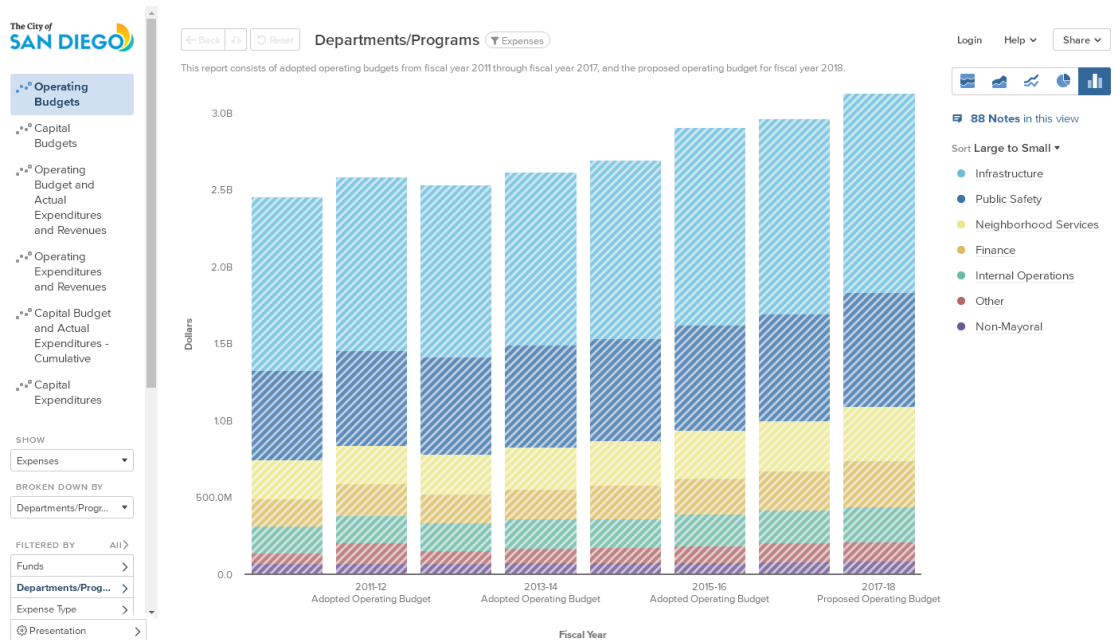interactive spreadsheet as shown in Figure 6.

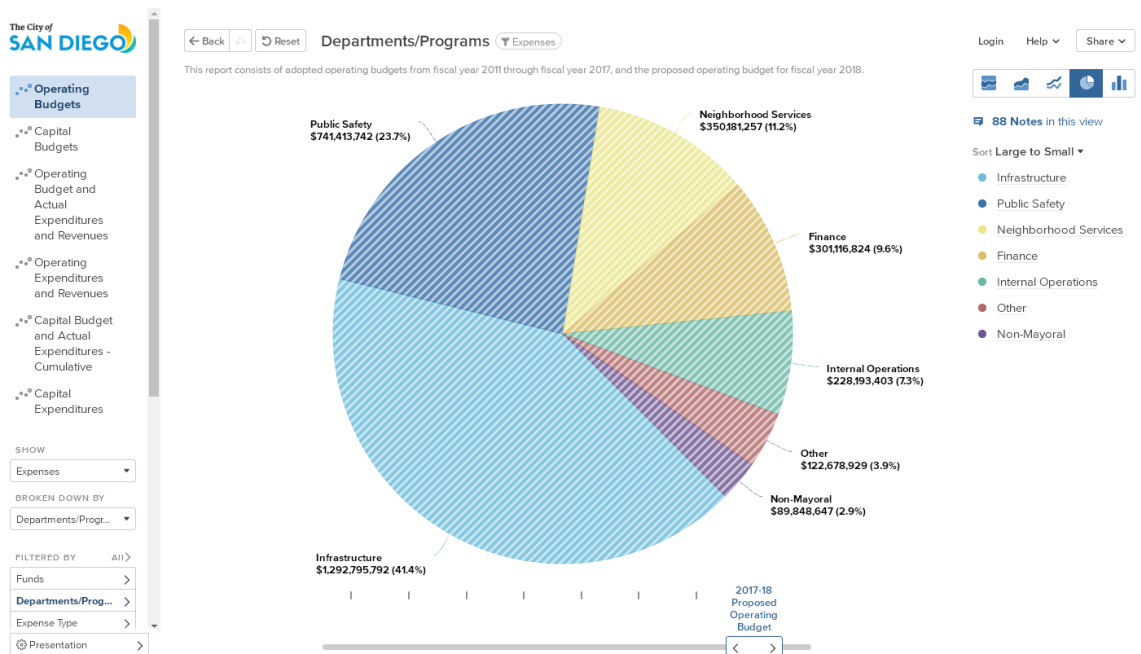Figure 3. Column Chart (OpenGov, 2017), from

https://sandiegoca.opengov.com/transparency#/.

Figure 4. Pie Chart (OpenGov, 2017), from

https://sandiegoca.opengov.com/transparency#/.
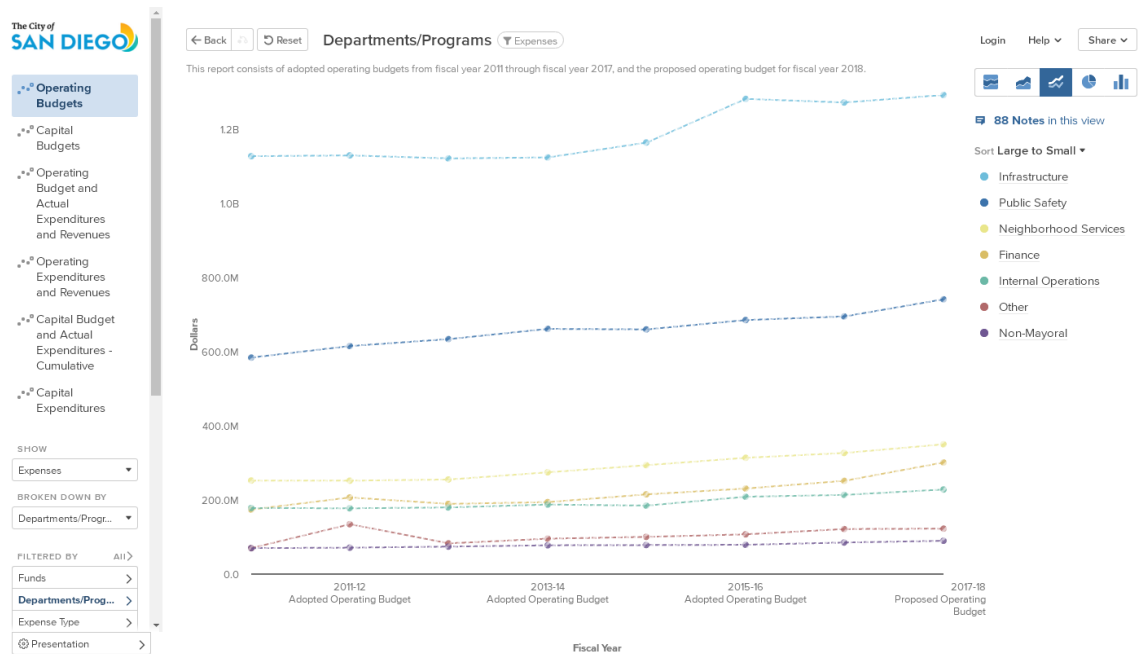
Figure 5. Line Graph (OpenGov, 2017), from

https://sandiegoca.opengov.com/transparency#/.

Figure 6. Interactive Spreadsheet (OpenGov, 2017), from

https://sandiegoca.opengov.com/transparency#/.

Mobile Civic Engagement Apps. Online convenience is quite evident in

many city websites. For example, many cities offer online bill payment options

and online updates to help inform residents of news and events. Additionally,

mobile apps have emerged to increase civic engagement. Mobile civic

engagement apps are pivotal tools that impact a wide variety of stakeholders,

such as residents, businesses, and civil servants. These apps simplify user

interfaces and ensure the timeliness of the information uploaded by the resident.

This is better option than social interaction and is an appealing solution for a

disengaged populace. In addition, incidents reported with app tools help local

governments better serve residents. The custom apps may employ icons, colors,

and other visual codes to denote the urgency and status of a concern. The layers

within the app allow for clearer prioritization and deeper insight, so that the local

government can take informed steps to resolve the issues of the public.

The free Oceanside mobile app is shown in Figure 7. This app helps

residents stay informed on environmental services, programs, events, classes,

and more. Users can also contact the Green Oceanside team for more

information on zero waste, water conservation, storm water prevention, and

renewable energy. Finally, users can find updated news from the City of

Oceanside's social media posts in real time, submit and track requests for

information, and use a calendar of upcoming events with maps and directions.

The City of San Diego uses the Get It Done app, which is a task manager

suited for Web browsers and smartphones. The user's tasks will always be

synchronized regardless of location. Some of the top online services using this

app are as follows: vehicles that have been abandoned by owners, curb/gutter,

dead animal, graffiti, litter/dumping, pothole, sidewalk, storm drain, street light,

traffic sign, traffic signal, and tree hazard. Some of these services are illustrated

in Figure 8. In addition to this app, the City of San Diego provides the Nextdoor

private social network for residents to discover and explore happenings in their

neighborhood.

Figure 7. Oceanside Mobile App (Oceanside, 2017), from

http://www.ci.oceanside.ca.us/gov/water/services_programs/app.asp.
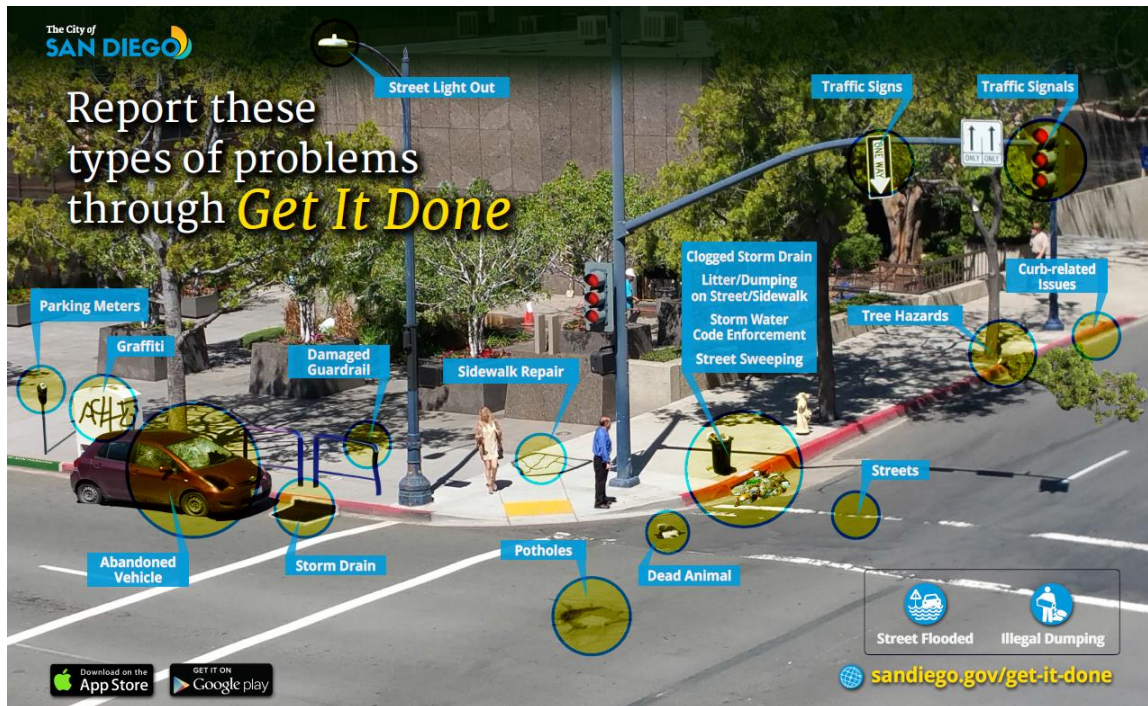
Figure 8. City of San Diego Mobile App (Get It Done, 2017), from

https://www.sandiego.gov/get-it-done.

Personalized Links. Customized personalized links help residents

navigate a myriad of options and only pick the ones that are relevant to their

needs or interests. This is an especially important asset as online civic

engagement grows in popularity and complexity. An example of the Carlsbad

personalized links website is shown in Figure 9. The website subdivides the

personalized links under favorites, news, and calendar. This helps the resident

keep track of news, special events, service requests, and public announcements.
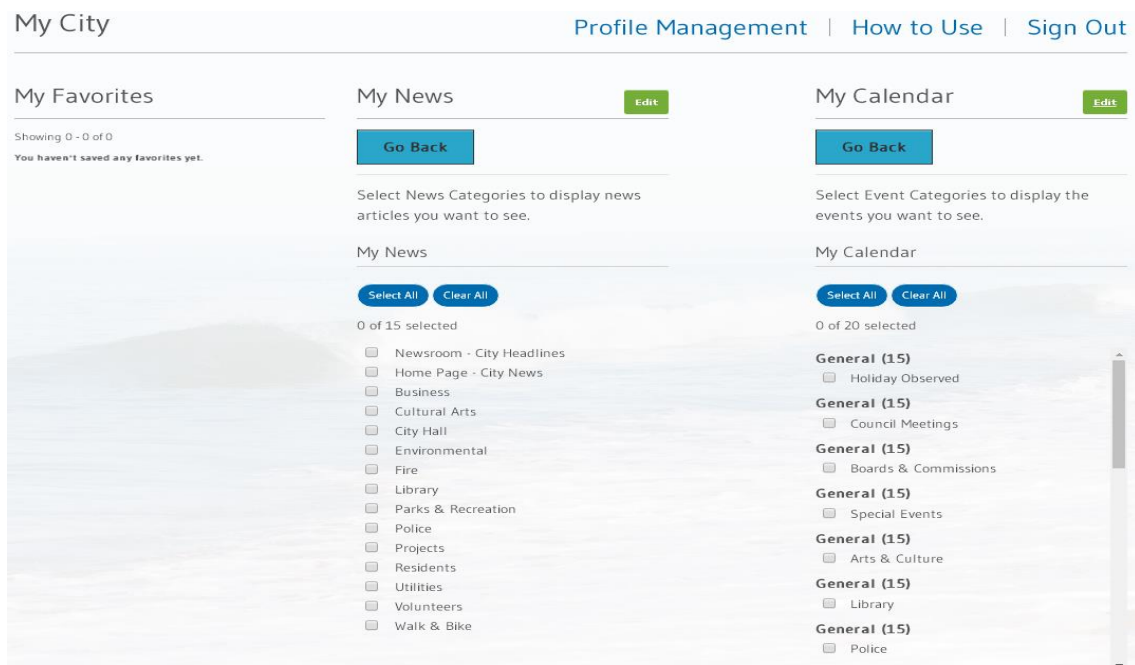
Figure 9. Carlsbad Personalized Links Website (Carlsbad, 2017), from

http://www.carlsbadca.gov/mycity/.

Summary

The local city government website is a key platform for civic engagement.

In this chapter, we have identified and ranked the 18 city websites in San Diego

county. We have analyzed the distribution of the composite scores and have

confirmed that this follows a Normal distribution. From this distribution, we

extracted the bottom 5 cities and have shown that their websites can be

improved using novel approaches for e-government, such as online civic

engagement, financial transparency, and personalized mobile apps. These

approaches not only enhance civic engagement in several city government

websites but also receive positive user feedback and high resident satisfaction

ratings.

CHAPTER FIVE

E-GOVERNMENT AND CIVIC ENGAGEMENT

Introduction

This final chapter continues to explore the relationship between e-government and civic engagement. By analyzing the data received from applying Dr. West's formula to the 18 cities of San Diego, clear steps have been developed so that the lowest scoring cities can use these steps to improve civic engagement. If the City of San Diego can excel at engaging citizens through e-government, then it is important we take a look at what the City of San Diego did well, and use that as a template for the lowest scoring cities to utilize when improving their own websites. In this final chapter, the following goals are listed:

1) Further expand upon the results of the lowest scoring 5 cities;

2) Demonstrate how vital e-government is to civic engagement;

3) Present a strategic plan for the lowest scoring cities, which will focus primarily on redesigning their websites using the City of San Diego as a model of success;

4) Demonstrate the importance of having a user-friendly and accessible website in order to engage citizens, and explain why this is important as the rate of online transactions steadily increases.

To review, the 5 cities that scored lowest were Santee, Solana Beach, Vista, Lemon Grove, and Coronado. These websites were rudimentary and did not provide users with many of the features mentioned in the design checklist. Each city will be reviewed and 5 key suggestions that will improve these websites and therefore increase civic engagement will be recommended.

<u>The City of San Diego Website: Why It Works</u>

Before providing the recommendations for the lowest 5 scoring cities, it is important to give an example of a successful website that engages citizens by utilizing outstanding features. The City of San Diego's website was awarded the Best of the Web 2016 (City of San Diego, 2016). Visually, the website design is professional and provides clear and relevant images that showcase San Diego's beauty. The website is easy to navigate, with clear sections and working links. There is a link that uses Google Translate to translate the website into more than 20 different languages, which is helpful for the large population of Spanish speaking residents, as well as for the increasing influx of immigrants and refugees from Arabic-speaking and East African countries. The Get It Done link is prominently displayed on the main page, making it easy for citizens to complete tasks such as applying for a business license, paying fines, and reporting incidents. For citizens interested in working for the city, there is a large tab that links the user to city employment. Other features that make this website stand out are updated news reports that relate to San Diego, a personalized

message from the mayor and upcoming events and attractions. There are even

links that direct citizens to local officials in city hall and public safety, as well as

leisure activities. This website is well-rounded and easy to navigate. At the

bottom of the main page, there are links to social media outlets, such as

Facebook, Twitter, YouTube, LinkedIn, and NextDoor. The website also contains

a Feedback link on the main page, which makes it easy for citizens to report

broken links and provide other important information to the website designers.

Unlike most city websites, the City of San Diego website is ADA compliant. This

means that it provides features and services that make web content accessible.

There are tools for blind and visually impaired citizens to access the materials on

the site. Users can increase the font size, ask for alternate videos, or make other

requests for accommodation. These are just some of the reasons that the City of

San Diego website has won awards. Therefore, the website of the City of San

Diego as an ideal model from which other cities can learn and implement

changes to increase civic engagement. In the following sections, each of the

lowest scoring 5 cities will be reviewed and 5 things that they can do to improve

the quality of their websites are suggested, thereby maximizing the benefits of e-

government.

The City of Santee Website:
Shortcomings and Suggestions for Improvement

The City of Santee website scored the lowest with a total score of 20. The

website design is very simplistic, containing few tabs on the main page.

However, when a user moves the cursor over the tabs, a number of dropdown links appear. Some of these links do not work and are confusing to navigate.

There is no option for any language translation, even though the Latino population is the second largest population at 17.1%. The site does not have any accessibility features to accommodate citizens with disabilities. Citizens are unable to make payments online for any city fees. The top 5 immediate improvements are:

• Fix all broken links, and update them regularly;

• Create a Spanish language translation option;

• Create accessibility options for disabled, deaf, and blind citizens;

• Offer citizens the ability to pay fees or fines online;

• Create a "Fix It" or "Get it Done" link.

If the City of Santee implemented these changes, it could greatly improve civic engagement. These first 5 steps are basic improvements. Certainly, there are more features that could be added to improve civic engagement, such as more transparent information on what the City of Santee council members are working on, meetings open to the public, and a more detailed calendar page. However, at this stage, the City of Santee would greatly benefit from making these crucial initial changes.

The City of Solana Beach Website:
Shortcomings and Suggestions for Improvement

Solana Beach is a seaside city on the Northern Coast of San Diego county. It scored significantly higher than Santee with a score of 36. This website

does look more professional and visually appealing than the City of Santee. However, the two websites share some of the same issues. The Hispanic/Latino population in Solana Beach is the second largest racial group (16%), but the site offers no Spanish language translation. This disenfranchises a large portion of the community. The drop down menu contains many sub-links, and there are links to PDFs instead of actual web pages. It is difficult to find the information you need. Online fee payment is not available. There is contact information for city council members, and other local services, but it does take a bit of searching to find them. Finally, there are no accessibility features for disabled citizens, or blind and deaf citizens.

The top 5 immediate improvements are:

• Streamline website to make it more user-friendly by decreasing sub-links;

• Change PDF files to web pages;

• Include Spanish language translation;

• Create accessibility features for disabled, blind, and deaf citizens;

• Create a feature for citizens to pay fees or fines.

The City of Solana Beach should implement the above changes in order to improve civic engagement. Streamlining this website would make navigation easier and allow citizens to quickly find the items for which the search. If the website offered a feature for citizens to pay fees and fines, it would bring in more Web traffic, which would make citizens more likely to read other information on the site, keeping them in the loop about what is going on in their town. Spanish

language translation would enable the Latino population to engage with their community and would give them a voice in policy-making.

The City of Vista Website:
Shortcomings and Suggestions for Improvement

While this website is initially visually appealing, it is difficult to navigate. The City of Vista also scored the same as Solana Beach with a total score of 36. When a user clicked on a tab, the overwhelming number of sub-links made the site difficult to navigate. There are no accessibility features for disabled citizens, blind, or deaf citizens.

The website does not use the full screen, thereby not utilizing all available space. This website could also benefit from a "Fix It" or "Get it Done" link where citizens can easily report potholes, dead animals or other issues that need to be addressed. The website does offer citizens the opportunity to pay fines online, and also offers a Spanish translation through Google Translate. This feature is important since 48% of the population is Latino. Contrary to some of the other sites, this website did offer a social media presence, with access to Facebook, YouTube, Twitter, and Instagram.

The top 5 immediate improvements are:
•   Streamline website to make it more user-friendly by decreasing sub-links;
•   Change PDF files to web pages;
•   Utilize blank space on the main page;
•   Add a "Get it Done" or "Fix It" link so citizens can quickly have problems resolved;

- Create accessibility features for disabled, blind, and deaf citizens.

While this website is an improvement over the previous three websites, there are still some major issues that need to be addressed. The space is not utilized properly, the website is difficult to navigate, citizens cannot easily resolve problems because there is no easy way for them to report them, and disabled, blind, and deaf citizens cannot access the information on this site. By fixing these problems, Vista could increase civic engagement, because even individuals with less developed Web skills would be able to navigate the site, as well as citizens who need the accessibility features. In addition, adding a "Get It Done" or "Fix It" link would increase web traffic to the site, keeping more citizens engaged and informed.

The City of Lemon Grove Website:
Shortcomings and Suggestions for Improvement

The City of Lemon Grove website also scored a total of 36, suffering from many of the same problems as the previous three websites. Most of the applications, permits, and forms cannot be filled out online and must be printed. There are no accessibility features for disabled, deaf and blind citizens. The "About Us" page does not offer prospect visitors any enticing information or highlight anything the city has to offer. The pages are slow to load, even for relatively simple pages. The website does offer translations in multiple languages, including Spanish. There are some pages that are still under construction and/or have dead links.

The top 5 immediate improvements are:

• Improve the "About Us" page to greater reflect what the city has to offer;

• Update the forms section so that they can be filled out online;

• Create accessibility features for disabled, blind, and deaf citizens;

• Provide access to notes or minutes from city council meetings;

• Remove dead links and update the site more frequently.

This website has some important changes that need to be made in order to improve civic engagement. The most important one is that there is no information for residents to access city council or planning meetings. This keeps citizens out of the loop about important changes and projects happening within their community. The "About Us" Page is not engaging and does not provide outsiders with a sense of the city. The forms section is predominantly print-based, and should be updated to have online functions. Once again, there are no accessibility features for blind or deaf citizens. There are dead links and sections of the website that have not been updated in a while.

The City of Coronado Website:
Shortcomings and Suggestions for Improvement

This website is promising and visually appealing but still lacks some key features. There is no foreign language access, which is an issue since Coronado is a tourist destination and the Latino population is at 14%. There is no "About Us" section on main page that describes Coronado or its history. There are no accessibility features for disabled, deaf, or blind citizens. There are minimal online services and the residents' guide has minimal features.

The top 5 immediate improvements are:

• Include the "About Us" section on main page;

• Integrate foreign language translation;

• Create accessibility features for disabled, blind, and deaf citizens;

• Increase the amount of online services offered;

• Overhaul the residents guide.

While this website contains more bells and whistles, it still only received a score of 37. This site was more streamlined and intuitive than the previous sites, but still needed improvement. While the website does seem to be geared towards tourists, it lacks any foreign language translation. It also does not account for the 14% of Latinos who live there, and whose primary language is Spanish. The amount of online services is minimal as well, which is sure to lessen site traffic for the residents of Coronado. Finally, there are no accessibility features for disabled, blind, and deaf citizens. If Coronado wants to actively engage the community that lives there it should implement these changes as soon as possible.

<u>Summary and Conclusion</u>

Many of the early optimistic scholars of e-government believed that e-government could inspire citizens to be engaged with their local municipalities. In larger cities, with dedicated teams, perhaps this was achieved. Although the City of San Diego's website has won awards, some of the other cities within San Diego county continue to fall short. The ramifications of this must be noted. This

project achieved a number of goals. First, it focused on city websites in San Diego county and applied Dr. West's formula. This has not been done before. While a great deal of scholarship exists out there about e-government, there is very little that encompasses all of San Diego. If the City of San Diego county can have an outstanding website, then the other cities can also improve their own websites, and as a result increase civic engagement. Secondly, this project has revealed steps that the lowest scoring 5 cities can take to improve their score and transform how they interact with their community members. Many of the problems found in the lowest scoring 5 cities were repetitive issues that could be fixed with little money and infrastructure. For instance, not having Spanish translation options in areas that have a sizeable Latino population is not helping the local municipalities. Rather, it is alienating a large group of people from engaging with their community, and staying informed about policies and measures that are being passed. The same thing can be stated about people with disabilities, deaf, and blind citizens. Most of the sites did not have ways for those citizens to engage with the content. This is also a problem that could be remedied.

The City of San Diego is an excellent example of how to create an accessible website and the other cities should look to it for guidance. Other websites were clunky and difficult to navigate. Any skilled Web designer could create a more intuitive and seamless website. Cities should put forth the effort to engage citizens by allowing licenses and fees to be paid online through their city

website. This would increase traffic to the site, and then citizens would be more likely to stay informed about what their community leaders are doing. Many of these issues are not difficult to fix and, if implemented, could actualize more of what the idealistic scholars hoped for with e-government—that it would be a radical and transparent exchange between governments and their citizens. City websites can benefit as well from increasing their presence of social media, as most people now are on sites like Facebook and Instagram.

According to Dr. West, "*In the long run, a flourishing e-government offers the potential of improved service delivery with enhanced democratic accountability.*" My project shows that most city websites in San Diego county do have a long run ahead of them if they want to improve citizen access to government information, even further to go when it comes to the incorporation of services and interactive technologies. Citizens bring a wide range of views and experiences to e-government, and governments benefit from citizen suggestions, complaints, and feedback. Something as simple as a comment section gives citizens power to voice their opinion about government service delivery. Governments need to figure out how to take advantage of e-government features that increase civic engagement. Future researchers can take the data gathered in this project, revisit these websites and track progress in the years to come.

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