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Information Sharing, Transparency, and E-Governance Among County Government Offices in Southeastern Michigan

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INFORMATION SHARING, TRANSPARENCY, AND E-GOVERNANCE AMONG
COUNTY GOVERNMENT OFFICES IN SOUTHEASTERN MICHIGAN

By

Lawrence Bosek

THESIS

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INFORMATION SHARING, TRANSPARENCY, AND E-GOVERNANCE AMONG
COUNTY GOVERNMENT OFFICES IN SOUTHEASTERN MICHIGAN

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ABSTRACT

INFORMATION SHARING, TRANSPARENCY, AND E-GOVERNANCE AMONG

COUNTY GOVERNMENT OFFICES IN SOUTHEASTERN MICHIGAN

By

Lawrence Bosek

The Internet has given rise to the availability of information at our fingertips.
While the public, particularly consumers, are more commonly described as being the
leading users and beneficiaries of electronic information services, businesses and
governments are also players in the arena for sharing official information. Information
can be easily stored on Internet websites for the public, businesses, and other
governmental offices to search and peruse when needed. This study examined the ease of
locating county governmental information, such as contact information for public
officials and financial reports, and surveyed elected county officials for purposes of
identifying how information is shared, what information is shared, and how to better
share information transparently. The results of the study are, for the most part, in line
with what general expectations might be along with some contradictory caveats regarding
shared information that are concerning enough to call for additional follow up
investigation, particularly with calendar scheduling, financial reporting, legal cases, and
social media availability. Aside from the caveats, overall the results show that the
Internet is being adequately utilized for basic information sharing purposes among county
governments in Southeastern Michigan. At the same time, however, and given the depth
of possibility with modern technology, there is much potential for the expansion of
electronic information sharing services, as also noted by the results.

DEDICATION

This paper is dedicated to all that yearn and are working towards an optimally transparent society where secrecy and competition are replaced with trust and collaboration.

ACKNOWLEDGEMENTS

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This thesis follows the format prescribed by the APA Style Manual and the department of Public Administration.

PREFACE

The research in this study is made possible by the contributions of elected public officials and Information Technology personnel associated with county governments in Southeastern Michigan. Improvements are made possible with awareness.

"There is not a crime, there is not a dodge, there is not a trick, there is not a swindle, there is not a vice which does not live by secrecy." – Joseph Pulitzer

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Chapter One: Introduction

Technology has brought the world closer together. People from one side of the world are now able to communicate and share information instantly with people on the other side of the world. We now live in an era of information at our fingertips. In the age of near ubiquitous information, it might seem like more of a personal choice to be uninformed about a particular topic of concern. That might be true to an extent, however, even with the abundance of information stimulating us at nearly every moment, there is still information that is not readily available for people to make informed decisions. There are also some that say private information is a permanent part of society. Exactly what and how much information needs to be private or public is a balance we, as a society, are figuring out together. The balance is continually being challenged by people who are actively working to implement policies for transparency.

The general meaning of transparency implies openness, or see-through, which is then applied to socio-politics with regards to accessing information and governmental records to better enable knowledge sharing and accountability. Finel and Lord (1999) define transparency as legal, political, and institutional structures that make internal information about a government and society available to actors both inside and outside of the domestic political systems.

Transparency, along with accountability, is rarely defined with precision and it tends to mean all different things to different people (Fox, 2007). According to Ann Florini (1998), a leading voice on the subject in modern times and one of those actively working to further transparency, particular with non-governmental organizations and global governmental relations, transparency is the opposite of secrecy. Florini also states

that transparency is a choice, and encouraged by changing attitudes about what constitutes appropriate behavior. Gupta (2008) and Mason (2008) further highlight the complex, contested, and important nature of transparency as a tool of governance and reconstituting embedded power relationships. Moreover, in an era in which information and technology are fundamental to society, determining who has the right to know what amidst constantly changing public acceptance presents an important and challenging policy in the presence of powerful entities.

Across multiple domains, transparency has been touted as a countervailing solution for social, political, and corporate issues (Roberts, 2009). Scholarly interest in transparency has enhanced our understanding of information sharing, accountability, and how transparency removes corruption, secrecy, and other kinds of misconduct (Flyverbom, Leonardi, Stohl, & Stohl, 2016). Finel and Lord (1999) further argue that countries with governments that are more willing to provide data about policy actions and decisions are more likely to be countries that permit better information flows of all kinds. Transparency, enabled by visibility, also has become a virtual stand-in for democracy by way of observation, clarity, and behavior (Flyverbom et al, 2016; Christensen & Cheney, 2015). A fundamental part of democracy is, after all, consent from the public being governed, and that consent is not only without merit but ultimately meaningless if the public is not informed (Florini, 1998).

The advance of Internet technology has also allowed for advancements with transparency through technological applications. Governments can now use electronic communication devices such as computers and the Internet to provide public services to citizens, other governmental offices, and businesses. Citizens' expectations are moving in

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a similar direction towards openness when it comes to local government. According to a German poll, people have greater satisfaction with government administration when there are additional options to contact government officials, such as those available on the Internet and social media outlets (Stember & Schulz-Dieterich, 2012; Forsa, 2011). The German study results also correlate to modern usage of social media sharing and the openness associated with such platforms. Citizens that are accustomed to expressing themselves by sharing their views and experiences through social media and e-commerce platforms, such as Amazon.com and Facebook.com, expect similar options to which they can communicate their views and experiences with government (Jesse, 2015). Social media has forced the German government to regard their citizens as a more active factor in local policy with a focus on open government, transparency, participation, and collaboration, which has to be supported by software standards that are also supportive of the focus (Jesse, 2015).

In modern times, even with the advent of technology, transparency efforts still struggle to find authenticity. Technology may make sharing information easier, although there are complications that come with technology as well. Software programs such as word processors and graphic editors have the ability to alter information as much as they have the ability to make information more available. This has been noted lately with the new presidential administration and their ongoing feud with the media. Particular instances include the release of photos by the National Park service showing a lower attendance at the inauguration address than what the executive branch was reporting and the information deleted from the white house website upon arrival of the new administration. While these occurrences are not unprecedented, the public is at a loss as

to authenticity and availability of the information, and would perhaps benefit from a set of standards put into place.

Studying the social-political construction of transparency in government contributes to our understanding of the changes in democratic interactions (Hood & Heald, 2006). A leading example of a democratic governance interaction is the intangible issue of citizens' trust in government, with transparency being proposed as the solution (Grimmelikhuijsen, Porumbescu, Hong, & Im, 2013). This paper examines the efforts of transparency, information sharing, and e-government methodologies at the county level in Southeast Michigan by measuring the ease of reaching select county information, such as financial reports and contact information, through the county websites. The focus in this paper also surveyed the use of information sharing methodologies, such as social media sharing, by counties in Southeast Michigan.

The research questions are asking about transparency with the information sharing process. The research questions focus upon the following:

- How many mouse clicks are required to find public official contact information and county reports on the website?
- What kind of information is being shared?
- To what extent are counties sharing county information through the website?
- What ways can information sharing be improved?

Research Methodology

The concerns of this research were narrowed by focusing on current commonly used information sharing methods. This study was quantitative in nature, with one free response option to allow participants a chance to express their concerns, thoughts, and

visions in order to acquire a deeper understanding. Mackenzie and Knipe (2006) mention that both quantitative and qualitative approaches to research is needed for a study to be fully effective.

Quantitative measures were mainly used to find the answers to the research questions. The qualitative option was provided as a way to express unique situations as well as any thoughts or visions from the surveyed population. An online survey, using Qualtrics, was distributed to County Administrators, Executives, Clerks, Commissioners, Sheriffs, and Treasurers. Telephone polling was also used to collect information after a few email reminders were unsuccessful and concerns about legitimacy were received.

This mixed method study used an online survey to query government officials in 12 counties within southeast Michigan and a computer with a mouse to measure the quantity of clicks to reach contact information and reports published by the county. These inquiries are being done in an effort to further the discussion and possibly catalyze follow up studies about the types of information shared and to what extent that local government transparently shares information with citizens. Transparency standards can reflect the need of specific reformations for information sharing policies in the state of Michigan and other governmental offices around the nation as well as throughout the world where information sharing, transparency, and the use of technology is becoming more of a priority.

Chapter Two: Review of Literature

Information sharing reforms, such as transparency policies, are an ongoing part of our evolving civilization. Such reforms have also been increasing with the assistance of technology. In modern times, information includes the formats and technologies that support its distribution, assurance, and analysis, which is also why the Internet as a means of communication is becoming so important (Bonson, Torres, Royo, & Flores, 2012). The advance of Internet technology also allowed for advancements towards electronic based government, or e-government, applications for increasing transparency. These e-government applications use electronic communications devices such as computers and the Internet to provide public services to citizens, other governmental offices, and businesses. E-government initiatives, found in almost all modern Western democracies, are a way that governments are responding to the pressure to change how their bureaucracies relate to citizens through the use of technology and the Internet (Bonson et al., 2012).

E-government can be defined as the use of information communication technologies, such as telephones, kiosks, and websites, to offer citizens and businesses the opportunity to interact and conduct business with government (Almarabeh & Abu Ali, 2010). OECD has noted that Electronic government particularly refers to the use of the Internet as a tool to achieve better government (OECD, 2003). Along with the purpose of this paper, E-government seeks to achieve greater efficiency in government performance through raising the performance of services easily, accurately, and efficiently (Almarabeh & Abu Ali, 2010). Muhammad, Almarabeh, and Abu Ali (2009) further describe E-government as more than a website, email, or the processing of

transactions via the internet. E-government becomes a natural extension of the technological revolution that has accompanied the knowledge society by adding new concepts such as transparency, accountability, and citizen participation in the evaluation of government performance (Mohammad, Almarabeh, & Abu Ali, 2009). E-government is also seen as a way to increase transparency in public administration by making it easier to relay information of activities to those being governed (Drüke, 2007).

Perceptions of Transparency

Going back a few decades to 1961, President Kennedy, at the Waldorf-Astoria Hotel in New York City, famously said in a speech to the American Newspaper Publishers Association that "the very word secrecy is repugnant in a free and open society," and continued on to say that the decision was made long ago that the dangers of concealing facts far outweighed the justified dangers for concealment (Kennedy, 1961). In the same speech, President Kennedy mentioned that a change in outlook, a change in tactics, and a change in mission is required by every businessman or labor leader, by every newspaper, by the government, and by the people (Kennedy, 1961). Observing and stating the need for such changes is easy, although the work involved to make the changes is where the difficulty arises. While strides have been made in transparent information sharing, closed information systems still dominate the federal political landscape as well as at the state and local levels (Glennon, 2014; Engelhardt, 2014; Griffith, 1990). A fundamental aspect of democracy is consent by the public being governed, and that consent is without merit or meaning unless the public is informed (Florini, 1998). Further, the proprietary nature of business makes for an extremely difficult path to change in the ways that Florini, Kennedy, and others mention. Not only

are powerful proprietary business interests fighting to keep the status quo, but there are also struggles between private and public information sharing (Florini, 1998).

Some public perceptions of the needs for transparency are expected according to Piotrowski and Van Ryzin (2007). In what may seem obvious, demands for more transparency are less with those that view government as already open and demands for more transparency are found among those that consider government to be closed. Further, politically engaged citizens who are in frequent contact with government offices also demand more transparency (Piotrowski & Van Ryzin, 2007). In addition to the correlation that Piotrowski and Van Ryzin present, trust in government literature supports the relationship between trust in government and public notions that democracy is working well (Marlowe, 2004).

However, government is still seen as inefficient, ineffective, or unresponsive in many circles, depriving citizens of abilities to engage in public affairs. Some argue that private sector management techniques can be applied by utilizing new ideas that stress collaborative relationships and public-private partnerships to help government become more efficient, effective, and responsive (La Porte, Demchak, & De Jong, 2002). Both ways would still involve techniques in the private sector, which is not especially known for transparency efforts. An intersection between the two occurs with the use of technological innovation allowing citizens to access public information and interact with government officials over the Internet (La Porte et al., 2002). Another method of improvement that has emerged in recent times is known as citizen empowerment, which has ties to transparency by providing citizens with supportive facilities to access

government, policy information, and the government officials involved (Barber, 1984; Vigoda, 2000).

Porumbescu (2015) presents an interesting counterpoint to any monolithic presumptions involving transparency efforts at the local government level. Porumbescu (2015) notes that transparency on its own does not sufficiently promote greater accountability and responsiveness in local government. He illustrates that transparency must be complemented by establishing formal channels through which the public can act upon the information given and, in practice, these kinds of outlets are rarely available. Hence an opportunity for synergistic improvement is highlighted. Also, a key implication is that effective, efficient, and equitable disclosure of information demands a strategically formed network of credible third party actors, such as universities or nonprofit organizations, through which information can be disseminated for the public to evaluate objectively (Porumbescu, 2015).

Transparency in History

Further changes are clearly occurring when observing activities around the present time. Transparency in government, for example, has been increasingly developing over the past century. Just one hundred years ago the idea of transparency was thought of as more of a threat to national sovereignty (Florini, 2002). About 50 years ago the United Nations recognized the right to information as a fundamental democratic right in article 19 of the United Nations Universal Declaration of Human Rights. Later on in the 1990s transparency was still complicated and seen as a rather marginal phenomenon mainly limited to journalists, scientists, and certain societal groups, which then changed to all citizens with the introduction of the Internet (Meijer, 2013). Now, in

more modern times, transparency is typically framed in a movement that not only governments and academia but also corporations should aspire towards (Ascher-Barnstone, 2003). Furthermore, around 70 countries now have freedom of information laws whereas twenty years prior only a few had any such laws (Florini, 2008). Not all of the laws are significantly meaningful or widely implemented although the numbers of countries adopting various transparency policies continues to rise and some laws are far more sweeping in their propagation of citizens' rights than anything seen in the industrialized democracies (Florini, 2008).

Freedom of Information (FOI) laws are among the more common policies regarding transparency. FOI laws aim to guarantee government transparency by allowing citizens and other interested parties to request information, such as records, from the government where officials are required to respond (Berliner, 2014). Sweden is known to have passed the first FOI law, the Freedom of the Press Act, in 1766. The act has become a part of their constitution and grants public access to documents as well as abolishing the censorship of all printed publications. There has been a rapid increase in FOI laws among countries around the world over the past 20 years (Berliner, 2014). Another 200 years have passed since Sweden that the United States would pass the Freedom of Information Act in 1966, which defines agency records subject to disclosure, outlines procedures for disclosing the information, and grants exemptions.

Public awareness is crucial for accountable, participatory governance. Access to information regarding official activities can empower citizens and journalists, constrain politicians, and expose corruption (Berliner, 2014). While transparency is not necessarily synonymous with democracy (Zakaria, 1997), it seems ironic that access to information,

particularly governmental, is hindered in societies that claim freedom as a foundation stone.

Strategic Transparency

Transparency is more than just releasing information to the public. There are different types and multiple layers involved with transparency policies with no uniform, standardized pattern (Meijer, 2013). For example, while reforming policies to make information available to the public is important, only making the information available to the public does little to help if the public does not know it is available. Reaching and being received by the public is an integral part to the success of transparency. Additionally, there are transparency efforts that are within the organization's control and those which are not (Lindstedt & Naurin, 2010).

Applying methods of transparency can be complex and accomplished in a multitude of different ways. There is also a huge diversity in the quality of transparency initiatives and the degree to which they are adopted (Meijer, 2013). A free press and nongovernmental organizations are some methods used with some in house control although critics contend that these methods are too soft to create real accountability, which is one of the desired goals of transparency. The critics argue that bad publicity is insufficient to make global actors change behavior (Hale, 2008). There are also more radical methods, such as removing all barriers to information and leaking private information. The Internet publisher known as WikiLeaks is one such example of a radical method of transparently disclosing information that is also outside of an organization's control. The WikiLeaks phenomenon, as Hood (2011) describes, is the mass release of secret information using the Internet to obstruct legal pursuit of whistleblowers and

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publishers and represents a new chapter in the transparency story. WikiLeaks also demonstrates the effects that the Internet, known as a bastion of freely accessible information, has on national secrecy where also transparency efforts might seem lacking.

Finel and Lord (1999) say that transparency is increased by any mechanism that leads to the public disclosure of information such as a free press, open government hearings, and nongovernmental organizations with an incentive to release objective information about the government. While more transparency generally means more accountability, it could also mean more surveillance (Fox, 2007). As governments become more complex the needs for transparency also change. Transparency in government is constructed in interactions between actors with different perspectives within various playing fields that also concurrently change the nature of the playing field (Meijer, 2013).

Wider Aspects of E-Governance and Information Sharing

Links have been shown to exist between intra-organizational and extra-organizational knowledge sharing and Freedom of Information request services. In a study administered in the UK, attitudes within governmental departments in regards to knowledge sharing and FOI requests showed a positive relationship and therefore suggested that efforts of transparency through FOI requests are not negatively impacted, as anticipated, by way of hindering information sharing (Allen, 2005). The same research also showed an overview of interconnectedness between knowledge sharing and FOI in local governments although this is based on a limiting assumption that one person's views can also be representative of an organization (Deverell & Burnett, 2012).

Different cultures of information sharing may exist within an organization and the relationships are a matter of debate. Some characteristics are thought to negatively impact knowledge sharing such as blame, coercion, and lack of trust (Deverell & Burnett, 2012). Call (2005) further concludes that knowledge sharing depends on the existing culture within an organization and, to be successful, the culture must first be changed to one that rewards knowledge sharing and builds trust among members. The process for sharing knowledge should then be designed around the existing culture of an organization as the process may work for one organization but not another with a different culture (McDermott & O'Dell, 2001).

On a daily basis members of an organization use what they learn from available information to take advantage of opportunities and solve the constant barrage of problems that arise (Call, 2005). Knowledge is the most sought after remedy for uncertainty (Davenport & Prusek, 2000). Everyone searches for knowledge because they expect it to help them in their work (Call, 2005). In the UK, the culture has changed in favor of knowledge searching across the board ever since the Freedom of Information Act 2000 was implemented in January of 2005. The UK Secretary of State for Constitutional Affairs is on the record saying there is now a right-to-know-culture that replaced a need-to-know culture that existed before (Falconer, 2005). This was also a part of the motivation for implementing the legislation. The goal was to transform the government from one based on secrecy to one based on openness (Straw, 1999)

Failing to adequately share knowledge and information has been the cause of service failures in the public sector (Bundred, 2006). To achieve the necessary scale of public service improvement, Bundred (2006) mentions that high quality leadership that

demands and rewards a culture of knowledge sharing both within the organization and with other public sector bodies is key. Technology also plays a part with these key factors as we continually improve upon our public services.

Jack Balkin's theory of democratic culture further plays upon the ideals of the culture of transparency and e-government in relation to enhanced participation. In the digital age, Balkin (2004) says that the focus of democratic theory and practice should be on participation instead of governance. Balkin further explains that,

> Democracy is far more than a set of procedures for resolving disputes. It is a feature of social life and a form of social organization. Democratic ideals require a further commitment to democratic forms of social structure and social organization, a commitment to social as well as political equality. And the forces of democratization operate not only through regular elections, but changes in institutions, practices, customs, mannerisms, speech, and dress. A "democratic" culture, then, means much more than democracy as a form of self-governance. It means democracy as a form of social life in which unjust barriers of rank and privilege are dissolved, and in which ordinary people gain a greater say over the institutions and practices that shape them and their futures.

> What makes a culture democratic, then, is not democratic governance but democratic participation. A democratic culture includes the institutions of representative democracy, but it also exists beyond them, and, indeed undergirds them. A democratic culture is the culture of a democratized society; a democratic culture is a participatory culture. (2004, pp. 32-33)

Balkin (2004) also touches upon the importance of regulatory and technological infrastructure for democratic values, which highlights the role that transparent e-government solutions play in ensuring that technological platforms will uphold, protect, and advance democratic values. These infrastructures within the information flow are composed of different and often hybrid approaches of legislation, administrative regulation, and co-regulation, among other forms, all of which increasingly involve the participation of active subjects, such as open-source communities and citizens (Tambini, Leonardi, & Marsden, 2008). Inclusive decision making, meritocratic modes of governance, radical transparency, and the alignment of passion with the organizational mission and purpose are demonstrated through participation within such open communities and organizations (Whitehurst, 2015).

Open exchange, collaborative participation, transparency, meritocracy, and community oriented development are all a part of the sharing culture known as "the open source way" (Open Source, 2016). "The open source way," which originated in the technology industry, is an attitude that embodies a willingness to share and collaborate with others in ways that are transparent, embracing failure as a means of improving, and expecting as well as encouraging everyone else to do the same. Furthermore, it means committing to playing an active role in improving the world, which is possible only when everyone has access to the way the world is designed. This includes government as well as other organizational areas intertwined with government such as science, education, manufacturing, health, law, and organizational dynamics (Open Source, 2016).

Whitehurst (2015) further mentions that leaders embracing transparent open source values can successfully redesign or create an organization suitable for the

decentralized, empowered, digital age. An open organization engages participative communities both inside and out by quickly responding to opportunities, having access to resources and talent, and inspires, motivates, and empowers people at all levels of the organization to act with accountability (Whitehurst, 2015).

Research Using Surveys

According to Rea and Parker (2005), the defined and reliable opinions of populations, which are key to public policy, can be obtained only through research conducted through the use of surveys. DeVellis (2003) further points out that it is frequently impossible or impractical to access variables in the social sciences unless a self-reported measurement scale is used. He also cautions that the researcher must be careful to ensure that the performance on a measure truly reflects the assumed variable.

Guidance from a variety of sources was utilized for the development of the online survey. A key concern is that the responses submitted actually correspond to true values (Bohrnstedt, 1969; Cronbach & Meehl, 1955; Fowler, 2002). Also, the use of clear and unambiguous words is essential (Schaeffer, 1992). Some researchers (Dillman, 2007; Rea & Parker, 2005; R. A. Reynolds, Woods, & Baker, 2007; Wozniak 2010) have compiled research-based texts to facilitate online survey construction and have demonstrated the success of these methods, which have been integral for developing the questions used in this study. The experience of the thesis committee chair, Dr. Carl Wozniak, was most useful for both creating and editing the survey questions.

Electronic surveys have distinct advantages over handwritten approaches used before technology has become so widely utilized. In particular, they are significantly less expensive to manage and have faster response times (Jansen, Corley, & Jansen, 2007). A

strong degree of measurement equivalence (Roberts, 2007a), reliability, and validity (Dillman, 2007) have also been found between online and paper surveys (Jansen et al., 2007). According to Beidernikl and Kerschbaumer (2007), this form of survey allows potential participants to be individually targeted through email and easily provides representativeness since the entire population can be polled—both being among the rationale for utilization in this study. Klassen and Jacobs (2001) report that Internet browser based surveys are less costly to implement than mail surveys and yield faster, more complete, and more accurate responses. Roberts (2007b) further notes some benefits of electronic surveys, such as providing convenience, personalization, and immediacy of feedback.

Constraints to electronic surveys are important to note as well and include generalizability to a wider population, low response rates, potential nonequivalence of measures, and lack of control of the research setting (Roberts, 2007b). Participants also must have access to the necessary electronic tools and have familiarity or access to someone familiar with using them, although this is more the reality in modern times as most public offices are now computerized and connected through the Internet.

Another concern with electronic surveys is sample bias (Lang, 2007). All members of the population must have equal opportunity and a fair chance to participate to prevent coverage bias. Studies by Vehovar and Batagelj (1996) and Zhang (1999) show that coverage bias is likely to be high with Internet browser based surveys because computer users tend to be younger and more affluent. For this study, it is expected that all participants will have sufficient access and familiarity considering the Internet is used to

conduct county business among the public officials and support staff. Additionally, the entire target population is available and all individuals were asked to participate.

The design of the electronic survey is critical to survey effectiveness and collection of unbiased data (Couper, Traugott, & Lamias, 2001). Low response rates may be associated with poor survey design (Morrel-Samuels, 2003) as participants become frustrated or have questions that, due to the nature of the tool, must go unanswered. In addition to demographic information, the survey used in this study will primarily be composed of questions with scalar and open-ended response options. According to DeVellis (2003) scales are useful tools when we wish to measure a phenomenon that we believe exists, but cannot directly assess by observation. He cautions, however, that distinctions must be noted between latent variables, which are caused by an underlying construct (Bollen, 1989), index variables, which may not share a common cause but do have a common effect, and emergent variables, which share characteristics without implying a cause (Cohen, Cohen, Teresi, Marchi, & Velez, 1990).

Chapter Three: Data and Results

Data collection for this study started at the beginning of December of 2016. The strategy was to get as much participation as possible before the new year and any changes in office due the elections from the previous month of November. This would provide time for responses from experienced officials currently in office. If needed, the data collection would carry over into January of 2017 with a new request for participation being sent that would also include newly elected officials. While the newly elected officials may not have the relevant experience, their insight is still valued as fresh thinking as well as to include any background experience they may have up to their current elected role. As it turned out, the bulk of the website data collection took place in December, 2016, and February, 2017, and the survey data collection ended by the 2nd week of February, 2017, to account for some scheduling conflict requests from a few participants. Phone calls were made during the month of January to provide a more human element, further details about the study, and to ensure legitimacy after questions and concerns were fielded from the population. The phone calls improved the data collection by as much as doubling the response rate.

Website Data

Some baseline data was gathered in December of 2016 in order to measure the quantity of clicks needed to access certain parts of county websites in order to find contact information, financial and budget reports, and social media availability. This mainly consisted of navigating around the different county websites, none of which followed a standard protocol or common navigation scheme. Some websites used drop-down menus while others used side-bar menus for content organization. For contact

information, some websites used web-forms while others published email addresses and phone numbers directly on the webpage. Finding the relevant information often involved a series of clicking through pages and then returning to previous pages in trial-and-error attempts to navigate to the correct place. While the trial-and-error process was not a part of the data collection, the seemingly tricky process seems important to note although a learning curve may also have been a factor along with the quantity of websites being studied. The target contact information sought from the websites also played a role to gather the names and contact information for the survey target population.

Mouse clicks for website information accessibility.

The quantity of clicks to access contact information, financial reporting, and social media availability was recorded in February of 2017. This involved reaching the main website and then counting the number of times a visitor has to click the mouse button to reach contact information in the form of a phone number or email address for the public officials, current county financial records, and any social media presence for the county. The counter was set to zero at the starting homepage for each county website. From there the easiest path was used combined with the quickest path for recording. For example, some county websites had easy to find directories with all pertinent departmental contact information listed in one place while others required clicking through the specific departments to find the relevant information. Some had drop down menus that appeared by simply hovering over the particular area of the webpage upon which information would appear that didn't require clicking to progress and also wasn't recorded as a click. This process typically took between 1-3 clicks to reach the desired

information, with the vast majority being only one click away from the homepage. The full results of the recorded clicks are located in Table 1, Table 2, and Table 3.

Public official contact information was satisfied by clicking until a phone number or email address could be found. Most of the county websites had contact information available and easy to find with some basic searching. Some counties had access to this information displayed on the homepage, although most required some looking around. In some cases, particularly Saint Clair and Tuscola counties, this took additional searching because only an address was listed or a public official has their own webpage that required redirection. The results for contact information clicks can be found in Table 1.

Table 1

Results from Public Official Contact Information Click Recordings

County	Administrator	Clerk	Commissioner	Executive	Sheriff	Treasurer
Genesee	1	1	2	N/A	N/A	1
Huron	N/A	1	1	N/A	1	1
Lapeer	1	1	1	N/A	1	1
Livingston	1	1	1	N/A	1	1
Macomb	2	1	1	1	1	1
Monroe	1	1	1	N/A	1	1
Oakland	1	1	1	1	1	1
Saint Clair	1	3	1	N/A	1	1
Sanilac	1	1	1	N/A	1	1
Tuscola	2	2	2	N/A	3	2
Washtenaw	1	1	1	N/A	1	1
Wayne	1	1	1	1	1	1

The search for financial and budget reports were not as easily accessible as finding contact information, although finding the information was still not very difficult neither. In most cases, the information was available in expected places such as on the webpage for the county administrator or treasurer. In a few instances the information was

either not available at all or current information was not available but historical records were available. These latter cases were still recorded as not available. The full results of financial and budget report clicks can be found in Table 2.

Table 2

Results from Financial and Budget Report Click Recordings

County	Budget Report	Financial report
Genesee	2	2
Huron	N/A	N/A
Lapeer	1	2
Livingston	2	2
Macomb	3	3
Monroe	1	1
Oakland	2	2
Saint Clair	1	1
Sanilac	N/A	N/A
Tuscola	2	2
Washtenaw	1	3
Wayne	2	2

Social media availability on county websites was by far the most absent piece of information shared by counties discovered from the study. For this study, social media included a Facebook or Twitter account being advertised on the county website. Some unofficial county social media accounts may be active although if they were not advertised on the county website and officially managed by the county they were not recorded. As expected, the more populous and urban counties showed a more prominent social media presence. Any social media availability was readily noticeable on the front page on the website either in a top corner or at the bottom of the page among other information grouped together for convenience. Some individual departments had social media accounts as well although these were not recorded for purposes of this study. The

larger counties also had other social media accounts, such as LinkedIn and Youtube. This study focused on the general county social media presence with Facebook and Twitter, being the two largest and widely used social media outlets. The results of the social media presence clicks can be found in Table 3.

Table 3

Results from Social Media Presence Click Recordings

County	Social Media Presence
Genesee	N/A
Huron	N/A
Lapeer	N/A
Livingston	0
Macomb	1
Monroe	N/A
Oakland	0
Saint Clair	N/A
Sanilac	N/A
Tuscola	N/A
Washtenaw	N/A
Wayne	0

Some additional notes were gathered regarding website layouts that seem relevant to mention as well. There were instances where some county websites had buttons that resembled a possible social media presence although these buttons only shared the county website link to social media through a visitor's social media account. These websites had no official advertised social media account managed by the county with official county information being shared, and if they do, it was not easily found or displayed on the website. Some contact pages were also listed as under construction without any contact information. Furthermore, some pages did not have any contact information displayed during the original inquiry in December, but upon the second inquiry in February for

recording clicks there was contact information listed at that time. This was also after

inquiries about the survey were conducted, and particularly by telephone in an attempt to

reach the pubic officials due to contact information not being listed. It is uncertain if the

survey inquiry had anything to do with the updating of the websites or perhaps other

reasons, such as the changing of public officials and personnel from the election, new

year initiatives, or other internal county related functions. Even though noticeable

deficiencies were found among the various websites in this study, some websites were

nicely structured with other interactive and information sharing services such as live

calendars and public document depositories.

Survey Data

The survey section of this study consisted of eleven questions using the Qualtrics

survey platform. Ten of the questions were multiple choice or scalar questions with

multiple sub-questions. These began with some baseline questions inquiring about the

participant's official position and county of service. The rest were focused on the

communication methods that the target counties may or may not be utilizing. The last

question was open ended asking for a more detailed response from the participants. The

detailed response could include any thoughts and visions that the participant may have

regarding county wide information sharing improvements. The complete survey in its

entirety can be found in Appendix A.

One hundred seventy public officials were asked to participate and full or partial

responses were received from 38 (22.4%) of them. Different public officials were

selected to give a wide range of thought among departments and individuals. All of the

public officials selected for the survey were elected, although other personnel, such as

deputies and other high level administrative staff were encouraged to participate as well.

The position titles of the public officials selected for the survey are the same as from the

website mouse click data section of this study and included Administrators, Clerks,

Commissioners, Executives, Sheriffs, and Treasurers. There were 38 responses out of the

approximately 200 public officials contacted. The response totals and percentage rate by

county are illustrated in Table 4, Table 5, Figure 2, and Figure 3.

Table 4

Participation Results by County

County	Contacts	Responses	Response Rate
Genesee	14	2	14%
Huron	11	3	27%
Lapeer	11	2	18%
Livingston	13	5	38%
Macomb	18	4	22%
Monroe	13	2	15%
Oakland	26	4	15%
Saint Clair	11	5	45%
Sanilac	9	1	11%
Tuscola	9	3	33%
Washtenaw	13	2	15%
Wayne	20	5	25%

Table 5

Participation Results by Position

Position	Contacts	Responses	Response Rate
Administrator	12	4	33%
Clerk	12	4	33%
Commissioner	116	22	19%
Executive	3	1	33%
Sheriff	14	3	21%
Treasurer	13	4	31%

The data received from the survey contained several discrepancies that needed to be resolved before calculations and analysis could be done. First there were issues with respondents selecting the "Other county administrator" option when selecting a position title for identification and then typing a response in the text box that also matched one of the identifying options that were already given. This would have caused the data to be unnecessarily skewed by not being counted among the same public officials in the list. Second there were numerous blank responses that caused the responses to appear larger in quantity. Data scrubbing was necessary to resolve these issues and involved deleting the blank responses and properly identifying the respondents to match their position title in the available options. The original raw data have been saved along with the modified scrubbed data.

Some respondents offered additional thoughts when they were contacted by telephone to request that they participate in the survey. This ranged from being pleased to participate in the study to some still willing to although begrudgingly. There were also some that refused to participate for differing reasons such as being newly elected and not familiar with the process and staff not wanting to grant access, or admittingly blocking

access, to the official to participate. Others thought they were not the appropriate person to participate or their department was not structured in a way that they saw would be helpful according to the survey questions as they do not report to other government offices. These concerns were peculiar considering other personnel within the department as well as the same officials from other counties have participated.

Data representing the kinds of information being shared.

The first question in the survey asked about the importance of different modes of sharing information, such as through newsletters, Internet websites, and public television services. The five rankings available were extremely important, very important, moderately important, slightly important, and not important. Newsletters were ranked towards the middle with the most officials, eleven in total, ranking them as slightly important with very important and moderately important being tied with eight each for the next highest rank. Websites were mainly ranked as extremely important and very important while email and Facebook were ranked as moderately important. The other social media option, Twitter, was mostly ranked as not important at all. Public television also ranked toward the middle with moderately important being the highest selection option. Paid print and direct mail both ranked towards the bottom half of the scale, although there were a sizable number of officials that indicated direct mail as being extremely and very important. Paid print and paid broadcasts all ranked toward the bottom half of the scale. These results are charted in Table 6 and Figure 4.

Table 6

Results of Survey Responses from Question #3 Indicating the Importance of Information

Sharing Tools per County Official

Information Sharing Tools	Extremely Important	Very Important	Moderately Important	Slightly Important	Not Important
Newsletter	3	8	8	11	5
Website	15	15	2	2	1
Public Address TV	1	7	14	8	5
Paid Print	1	2	10	9	14
Paid Broadcast	0	2	7	9	18
Direct Mail	6	6	10	4	10
Facebook	6	7	13	6	5
Twitter	4	3	6	9	13
E-mail	8	9	15	1	3

The second question inquired about technology personnel. The question asked who maintained the county website. Choices included paid internal Information Technology staff, other paid internal staff, paid external or outsourced individuals or company, volunteer staff, and an option if they did not know. The vast majority of results indicated that the website maintenance was handled by internal employees, whether they are dedicated Information Technology personnel or some kind of shared responsibility with other staff members. Paid internal Information Technology staff had the most responses at 29, followed by other paid internal staff with 6 responses. This question helped to put the technology responsibilities into perspective.

The extent of information sharing through the county website.

The next two questions dealt with the availability of certain information on the county website. Each public official was asked to indicate to their level of knowledge what information is available on their county website, such as meeting minutes, hiring

notices, and annual reports. Most of the public officials indicated that paid internal staff was responsible for the website maintenance. Most of the counties also indicated that meeting minutes, meeting schedules, staff contact information, department directories, hiring notices, office hours, and annual reports were available on their website. Very few officials indicated that staff schedules, current legal actions, and private employee login sections are available on the county website, or to their awareness. These responses along with other lesser indicated available types of information are charted in Table 7 and Figure 5.

Table 7

Results of Survey Responses from Question #5 Indicating the Awareness of Available Information on the Respective County Website per County Official

Information Types	Quantity of Response per County Officials
Meeting schedules	36
Meeting minutes	33
Office hours	33
Annual reports	32
Hiring notices	31
Staff contact information	31
Department directory	29
Updated notices	22
Current news	21
Current treasury reports	18
Bidding awards	11
Grant awards and proposals	6
Current legal actions	3
Staff schedules	3
Private login for residents	2

Continuing on with the availability of information, the next set of questions asked for agreement levels on a scale regarding different information sharing policies for county residents. The scale ranged from strongly agree to strongly disagree with two intermediate levels on each side of the scale and a neutral response. The largest quantity of agreements includes the public right to know all county related information and receiving this information promptly, ease of navigating websites, availability of annual reports, and websites being updated at least monthly. The largest disagreements include county official calendars being publicly available, receiving reports about website usage, and the existence of information only shared locally or internally. Neutral responses showed prevalence when asking about citizens preferring to receive information via postal mail. Totals for each of the agreements are charted in Table 8 and Figure 6.

Table 8

Results of Survey Responses from Question #6 Indicating the Quantity of Officials in

Agreement with Citizen Based Information Sharing Statements

Statements	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
The public has a right to know all county related business	19	15	3	1	0	0	0
It is important that citizens can get county information promptly	22	14	1	1	0	0	0
County officials' daily calendars should be available to the public	3	6	1	8	3	12	5
It is easy to find contact information for specific individuals on our website	10	19	4	0	1	2	1
Our website is updated at least monthly	17	12	2	1	1	1	1
Our website is easy to navigate	8	18	7	1	1	2	0
We receive a regular (at least quarterly) report about the number of visitors to our website	2	2	3	12	3	13	1
Our citizens still like to get information by mail	2	8	7	13	2	4	2
There is information we want to share with residents, but would prefer not to distribute beyond our borders	1	5	3	8	4	10	6
Our annual report is available in multiple formats (online, print)	10	18	2	3	0	3	0

Question seven asked about the amount of county related information that is made available on the county website. This question provided a sliding scale from 0% to 100% that the respondent could slide back and forth to indicate their estimation of the percentage of information regarding official activities could be found on the website. The charted results of the quantity of public officials choosing a particular percentage, the percentage they chose, and the percentage of each selection in respect to the whole of responses, respectively, can be found in Table 9 and Figure 7.

Table 9

Results of Survey Responses from Question #7 Indicating the Amount of County

Information Made Available on the County Website per County Official

Amount	Quantity of Public Officials
100%	2
90%	8
80%	11
70%	3
60%	3
50%	3
40%	2
30%	1
20%	2
10%	0

External and internal information sharing processes.

Question eight asked about the frequency of sharing particular pieces of county information with the public. There were three options available on a scale starting with actively sharing and followed by sharing when requested and then never sharing. The pieces of information asked about are similar to the pieces of information asked about in question five regarding the types of information available on the county websites,

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including some additional options such as salary, past legal actions, financial reports, and community statistics. Respondents were encouraged to leave the answer blank if they did not know the answer. The results of these responses are available in Table 10 and Figure 8.

Table 10

Results of Survey Responses from Question #8 Indicating the Frequency of Shared

Information per County Official

Information Type	Actively Shared	Shared When Requested	Not Shared
Personnel salaries	6	25	2
Current legal actions	1	22	6
Past legal actions	3	25	2
Bidding results	15	16	0
Hiring results	6	21	5
Financial reports	33	1	0
Meeting minutes	34	1	0
Community statistics	29	2	1
Elected official daily calendars	2	7	21

The final quantitative question focused on information sharing policies between county departments and employees. Respondents were asked to rank internal information sharing processes on another agreement scale ranging from strongly agree to strongly disagree with two intermediate agreements in between and on each side of a neutral option. The agreements for this question were mostly in the middle to high range while the disagreements were towards the low end of the scale. The results of this question are charted in Table 11 and Figure 9.

Table 11

Results of Survey Responses from Question #9 Indicating the Quantity of County Officials

in Agreement with Internal Information Sharing Processes Among Employees

Information Sharing Processes	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
A password-protected section of our website is available to employees	7	15	3	5	0	4	1
Departmental meeting minutes are shared with all other departments	7	4	3	12	2	4	2
Department heads hold meetings at least monthly to share information	4	10	5	8	1	5	1
My department has an efficient process in place to share information with employees	9	19	3	4	0	0	0
Employees in my department have ample means to bring issues to others in the department	13	16	2	3	0	0	0

Data for improving information sharing.

The final survey question gave an opportunity for participants to respond with

more details through an open-ended format. The question asked about ways that their

county could improve the sharing of information with county residents. Although not

explicitly stated on the survey, the target population county officials were also implored

through the participation requests, by email and telephone, to offer their thoughts and

visions in addition to suggestions for improvements. The qualitative aspect of this question provides a deeper level of insight for the study in a way that is complementary to the quantitative sections. Telephone conversations with the officials also provided qualitative feedback about the study mentioned in earlier sections of this paper. These results, however, were not officially recorded but instead mentioned in brief within this paper. The full and unedited results of the open-ended question are displayed in Table 12.

Table 12

Results from the Open-ended Question

In what way could your county improve how it provides information to residents?
Interface with academic, medical, local governments institutions through technology.
I think our residents are currently satisfied.
We do receive good information coverage in our County Newspaper. That was no(t) included in the above question about disseminating informatio(n).
Website could be organized better to provide a more user-friendly experience.
That would be a good question to ask people and I don't know if that has ever been done.
Increase the use of social media. That seems to be what most folks rely on.
Live video broadcasts of Commission meetings
Website could be improved
Sometimes it takes too many clicks to get to the information desired.
The Commission could more pro-actively share information regarding the actions they have taken via press releases, and or public forums. The CEO's office needs to be more honest in its communications with the Commission and the Public. The media needs to be less biased in its coverage of County Government. County Commission meeting should be televised and available throughout the county free on public access channels. The budget process should be available to the public via the internet and public access TV from the time it is proposed by the CEO until it is disposed by the Commission. The entire bid process should be available on line too, from the RFP, until the contract is approved and awarded. All appointee names, resumes and salaries should be public knowledge. I am all about transparency. I think the public should have access to any information they want with the exception of attorney client information, relevant to current litigation or matters discussed in closed session.
By attending televised local council meetings.
Television broadcast of all Commission meetings
More on website, more newsletters. We try and get emails and that is helpful.
Live broadcasts od Board of Commissioners meetings
Newsletter distribution but that is costly and there are too many other basic governmental services that require existing resources.
Move information on web page. Improve search capabilities. Optimize web site for mobile access
Increase their taxes exponentially (if we weren't already at our tax limit) to provide an in-house IT department that could constantly monitor the webpage (and face book and twitter accounts if we had them)
I believe I am the wrong person to be answering these questions. The more appropriate person would be the HR Dept. Director or the County Coordinator.
My office sends direct billing to residents and also has a website. We mail directly to people who have received foreclosure extensions also.

Chapter Four: Discussion

The website data and survey responses provided insight into the atmosphere of information sharing at the county government level. Considering the powerful positions and administrative duties that governments have in society, proper information sharing techniques are key to the health and freedom of citizens, businesses, and other organizations. For example, the ability to access financial reports is necessary to ensure that money is being spent wisely, fairly, and with accountability. Another example is the availability of environmental reports and health related information, as in the case of the Flint water crisis that occurred in Genesee County due to contaminated water. Some questions to ask when investigating information sharing techniques might be if the Flint water crisis may have been prevented if more transparency and better information sharing methods were in place, or whether monetary influence in regards to government spending and lobbying might be better understood and more accountable.

The data show a general compliance with sharing basic information. Public officials are reachable with their contact information published and relatively easy to find. Financial reports are much the same although some standardization could help the information seeker, especially if they are not familiar with the way a particular county organizes information. Furthermore, most of the county officials surveyed are in a general agreement that information sharing is an important aspect of county government with technological services, such as websites and email, as well as newsletters being the most common method. The following paragraphs will further elaborate on the results of both the quantitative and qualitative components of the study.

Website Data

Most counties had all of the relevant information available. There were some missing pieces of information including financial reports, contact information, and social media, although this was by far the exception. Perhaps further investigating the reasoning would explain the reasons for not having the information readily available to the public. Reasoning might include a lack of need or interest, especially for the rural areas where social media might not be seen as a beneficial service for communities that are not as reliant on modern technology as compared to cities. Livingston county was an exception to the social media results as being a majority rural and among the least populated in the study. Genesee and Washtenaw counties, both with larger populations and urban city centers, did not have any social media presence. Perhaps the local citizens prefer to visit the government offices instead of communicate by email or telephone as the addresses for county offices were also available on the county websites and more so than other means of communication. This still does take into account other people that might use the website from outside of the county, such as businesses and citizens from other counties or governmental offices. A follow up study could be more detailed as to the reasoning and nuances of social media usage.

Another factor of information sharing is the layout of the website. Searching for data took time due to a learning curve regarding familiarity with the way the website was structured. Some websites used drop menus and departmental pages while other websites used directories and categories. There was no standard template for information on any of the websites. This made searching confusing and tiresome at the beginning. Website complexity contributed to an increased number of clicks as well, although overall the

information was not very difficult to find. However, a common structure or template would be a nice improvement for finding the same information among different county websites. Perhaps further investigations could lead to the formation of a standard template to use for making county information available. The template could include a common directory structure while preserving the ability to freely modify pictures, colors, and other artistic elements for creative freedom between different counties and their unique environments and services.

While information availability was not a large issue among the selected counties, there were some websites that were not providing basic information at the time of the study. Genesee county in particular had some webpages listed as under construction without any information available. Huron county did not have all of the public officials selected in this study on staff or listed. Smaller and more rural counties are to be expected to have less need for all personnel and the associated information. The county executives position is an example as not all counties have or need an executive to handle county affairs. Executives are only prevalent among the largest counties in the study. Likewise, with social media as any Facebook or Twitter accounts were mainly found in the largest and more urban counties, however, there are a few exceptions as seen with the social media presence with Livingston county. Social media may also be lacking due to the lack of interest or need among local residents as well although social media is not only for local citizens living within the county in question but can also be useful for other counties and citizens from other jurisdictions.

Survey Data

The majority of the data came from surveying select public officials in Southeastern Michigan. Given the widespread use of technology in society, it was unsurprising to see that most county officials utilized and preferred technological information sharing methods. While print media and mail could also be considered technology, these forms are less preferred today than they were in historical times. Modern technology, such as the Internet and email messaging services, provide near instantaneous availability of information at the click of a mouse button.

Data representing the kinds of information being shared.

The survey results show that website and email were viewed as the most important method of sharing information while paid print and broadcast were viewed as the least important. This might be due to a number of reasons, such as costs and audience. Paid broadcasts come with a much higher price tag when compared with the costs of hosting a website. Depending on the specific web needs of the county, a typical web hosting package can run roughly from $10 - $50 dollars per month with an additional setup fee to build the website if staff on hand are unable to do it in house. When spread out over the span of years that a website is in service, the price of the website decreases. This would be a much cheaper and more effective way to share information considering the costs of a paid broadcast are much higher, reaching upwards of $300 or more, for only a 30 second advertisement that is shared only a few times on any number of broadcasting stations and with an audience that might not be tuning in at the time of the broadcast. The Internet, being available at all times, provides the flexibility for the audience to tune in at any time as their availability allows. Public broadcast showed to be

an exception with a large quantity of officials viewing it as moderately important, likely because it is already paid for and the citizens know they can tune in to a specific place to receive the information.

Out of the information types shared on county websites, most of the public officials responded with an acknowledgement that their county shared most of the information asked about in the survey. The least of these were grant and bid awards and legal actions with only a few counties acknowledging the information as being available on the website. This might be due to confidentiality agreements or laws; however, these information types are useful for the public. For instance, legal actions in a particular county area, such as environmental violations or code infringements, might be concerning for residents in that area. Further inquiry as to the reasoning for not disclosing such information would be beneficial as an addendum for subsequent studies of this sort. Staff schedules and private employee login areas were also among the least acknowledged, likely because of their need considering the office contact information and hours are readily available and the county business might not be large enough to have remote employee logins necessary. Again, further inquiry would be beneficial to document the official reasoning. There may also be other undisclosed beneficial information types of which the public is not privy.

While only 60% of respondents thought that 70% of the county information was made public on the website, most of the public officials thought that the public has a right to know all county information and in a prompt manner. The other 40% of respondents thought that less than 70% of county information was made public on the website, which expounds on issues of transparency. A majority also acknowledged that the information

available on the websites are updated at least monthly and easy to navigate. This data can perhaps provide some reassurance that counties are in effort to make all of the official county information public, however, as previously mentioned, there are still some information types that might not be shared. The specific question asking if there was any information that they want to share but prefer not to presented mixed results. Furthermore, most county officials responded in opposition to making the calendars of the county officials available for public viewing. While it is understandable that focusing on minutiae is probably not an efficient use of resources, at the same time the technology available would make such information more easily available on websites or other public calendar systems. Knowing what county officials are doing, who they are meeting with, and where these events are taking place seems relevant, especially in the age of social media where people routinely share their daily activities with each other at will. Sharing of such information is becoming more common, similar to watching the news on television. A follow up study would be helpful to see if any improvements are made and to guide the direction for increasing the amount of information that is shared to the public

Additional reassurance regarding county efforts making as much information public as possible comes from the responses of public officials indicating that particular information is either available or made available upon request. The only information type that scored low was, again, making the calendars of county officials available for public viewing. Considering the repeated negative responses about calendars, an inquiry about specific reasoning would be particularly interesting and perhaps shed light onto any efforts to conceal or acquire the necessary technology to make it possible. Current legal actions were also indicated as not being available, which could be for reasons previously

mentioned. Whether this is intentional or not could be investigated along with the reasoning for not disclosing the calendars of public officials.

Interdepartmental information sharing efforts were reported as being lacking in regards to basic types of information such as meeting minutes. This might be a more systemic issue or only pertaining to meeting minutes. Previous responses also show similar misalignments. Even though most responses have indicated the process is efficient and there are ample means to share information with employees, previous responses show contradiction and would indicate improvements can be made interdepartmentally. The unfavorable responses indicating that departments are not actively having meetings to share information may also be indicative of a lacking of interdepartmental information sharing policies or perhaps the initiative is not widespread.

Data for improving information sharing.

The qualitative responses provided some clarification to some of the contradictions. A common theme called for technological improvements to share information but also pointed to a deficiency of funding and resources to carry it out. This might be part of the reasoning for the missing 30% of information not available on the website as mentioned in the quantitative section. An increase in social media usage, which was also mentioned, could be an easy solution for filling some of the gap in making more information available through the website. Mobile access was specifically mentioned and would require website upgrades for accommodating the smart phone and tablet devices that are commonly used by the public.

Broadcasting the board meetings was another common theme. This would require the proper media technology and therefore also the funds and resources to use the

equipment and produce the videos if the county does not already have such equipment. The more populous counties might have public broadcasting already in place and available although the more rural counties would likely have to also include this infrastructure in the implementation. Board meetings can be numerous depending on the county as well, and with other meetings such as budget and committee, which was also mentioned as being needed, the total costs will increase.

Some external factors were noted, which was not a part of the focus of the study, although they still provide additional insight into the county level situation. Attending the board meetings was one of the responses, which was an interesting comment. Board meetings are typically not a popular event that many people like to attend although the public is still encouraged to attend and be involved in community affairs. Perhaps if more people attended, or at least showed desire to attend the meetings, there would be cause for expanding the services. Implementing online meetings, televised meetings, or livestreaming and archiving the meetings through the website are possible solutions if people are unable to attend meetings due to schedule availability or other reasons, which would still require the use of more technology. Raising taxes was mentioned as another possible solution for funding internal technology departments that could then implement more services. An overly biased media rounded out the external comments, which can impact public opinion and force government to act in ways that are not necessarily needed. Internal changes can be catalyzed by media exposure.

Furthering on internal changes, one of the more striking responses was a call for more honesty. While this was only from one participant, and therefore one department in one county, it is an alarming deviation from the responses gathered thus far and is a clear

indication of a necessary improvement. Whether these same sentiments can be found in other departments and in other counties is unknown, however, from the data, we do know that there are a few county officials that prefer not to share some pieces of information with the public. The conflicts reported between counties having efficient information sharing processes and a sizable quantity of unavailable information may also be a factor as the call for more honesty was accompanied by a call for more pro-active information sharing with the public.

A comment leaning towards full transparency was among the more interesting responses. The response explicitly mentioned that the public should have access to any information they want, including the bid process, salary information, and resumes, with the exception of attorney client information that is relevant to current litigation or matters discussed in closed session. This also sheds light on the reasoning for the low responses for disclosing current legal matters in the quantitative section of the survey. The support for more transparency seems to lean with the majority in the data, and perhaps these supportive words are more shared among the public officials given their position in the public sphere, although we still cannot be sure, as responses also indicate indifference of having information that is preferred to not be shared, the large agreement to not share the calendars of county officials, and the lacking of social media in the majority of counties included in this study.

Summary and Conclusions

Aside from a few caveats and circumstantial shortcomings, the data show a generally standard and typical display of e-government information sharing effort from counties in Southeastern Michigan. The findings presented in this study are aimed at raising awareness and improving the ways that information is shared between county governments and the public. Improving information sharing in society as a whole, while not the focus, is a part of the larger goal of this study, and can be handled a number of different ways. Examining the findings and shortcomings of this study and use them to develop a refined and more focused follow up study is a recommended course of action to learn how to effectively make information more freely available and transparent through enhanced information sharing efforts.

All of the counties have most, if not all, of the contact information of their public officials and financial reports available on their respective website. This information is easily reachable for the most part, taking one to three clicks of the mouse to find the information. Social media was one of the shortcomings among the counties. Only several of the counties had a social media presence, although those that did had their availability prominently displayed on the webpage or it was easy to find. Other information sharing methods were shared for the most part across counties included in the study.

Some information sharing contradictions were among the caveats. There seems to be some confusion about what all should be shared, although most counties agree that the public has a right to promptly know all county related information. The confusions may stem from current legal limitations, such as with compromising court cases, or desirability, as with sharing calendars of public officials. However, looking at the

numbers, overall the counties appear to be doing well at keeping basic information about the county readily available to the public using current technology and making it available in multiple formats.

Funding for new technology was a reported hindrance. Initial costs as well as maintenance can add to budgets that are already strapped. There are options to resolve such blockages, such as creative resource sharing tax policies and utilizing community based, free open-source solutions (Vincent, 2012; Jesse, 2015; Dizon, 2009). Social media in itself offers low cost options for sharing information among a wide audience with real time news feeds that can be embedded in an existing website. Basic social media services can be easily maintained by existing staff and are typically free to use.

There is still the argument that transparency can be a hindrance, although the benefits, including accountability and public awareness, contend still with any hindrances (Licht, 2011; Florini, 1998). While the issues found in this study are more locally nuanced, there is importance for transparency on the local level as there is at the federal level (Veal, Sauser, Tamblyn, Sauser, & Sims, 2015). There is data to support the public's demand for transparency as well. Fiscal, safety, and principled openness are among the concerns along with political ideology, confidence in government leaders, frequency of contacting government, and especially the perception that there is currently not enough access to government (Piotrowski & Van Ryzin, 2007). This study may also add to these concerns and therefore encourages more research to improve transparency locally as well as nationally where links are found.

References

Allen, M. (2005). Knowledge shared = Knowledge squared. *Inside Knowledge, 8*(10).

Almarabeh, T., & Abu Ali, A. (2010). A general framework for e-government: Definition maturity challenges, opportunities, and success. *European Journal of Scientific Research, 39*(1), 29-42.

Ascher-Barnstone, D. (2003). Transparency: A brief introduction. *Journal of Architectural Education, 56*(4), 2-5.

Balkin, J. (2004). Digital speech and democratic culture: A theory of freedom of expression for the information society. *New York University Law Review, 79*(1), 1-55.

Barber, B. (1984). *Strong democracy*. Berkley, CA: University of California Press.

Berliner, D. (2014). The political origins of transparency. *The Journal of Politics, 76*(2), 479-491.

Bohrnstedt, O. (1969). A quick method for determining the reliability and validity of multiple-item scales. *American Sociological Review, 34*, 542-548.

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: John Wiley.

Bundred, S. (2006). Solutions to silos: Joining up knowledge. *Public Money & Management, 26*(2), 125-130.

Call, D. (2005). Knowledge management – Not rocket science. *Journal of Knowledge Management, 9*(2), 19-30.

Christensen, L., & Cheney, G. (2015). Peering into transparency: Challenging ideals, proxies, and organizational practices. *Communication Theory, 25*, 70–90.

Cohen, P., Cohen, J., Teresi, J., Marchi, M., & Velez, C. N. (1990). Problems in the measurement of latent variables in structural equation causal models. *Applied Psychological Measurements, 14*, 183-196.

Cronbach, L., & Meehl, P. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52*, 281-302.

Couper, M., Traugott, M., & Lamias, M. (2001). Web survey design and administration. *Public Opinion Quarterly, 65*, 230-253.

Davenport, T., & Prusak, L. (2000). *Working knowledge: How organizations manage what they know*. Boston, MA: Harvard Business School.

Dillman, D. (2007). *Mail and Internet surveys: The tailored design method*. Hoboken, NJ: John Wiley.

DeVellis, R. (2003). *Scale development: Theory and applications* (Vol. 26). Thousand Oaks, CA: Sage.

Deverell, A., & Burnett, S. (2012). Need-to-know-cultures: An investigation into intra-organizational and extra-organizational knowledge sharing cultures in local government in the UK. *Knowledge and Process Management, 19*(3), 131-141.

Dizon, M. (2009). Free and open source software communities, democracy and ICT law and policy. *International Journal of Law and Information Technology, 18*(2), 127-141.

Drüke, H. (2007). Can e-government make public governance more accountable? In A. Shah (Ed.), *Performance accountability and combating corruption* (pp. 59-87). Washington, DC: The World Bank.

Engelhardt, T., (2014). *Shadow government: surveillance, secret wars, and a global security state in a single-superpower world*. Chicago, IL: Haymarket Books

Finel, B., & Lord, K. (1999). The surprising logic of transparency. *Internationa Studies Quarterly, 43*(2), 315-339.

Florini, A., (2008). Making transparency work. *Global Environmental Politics, 8*(2), 14-16.

Florini, A. (2002). Increasing transparency in government. *International Journal on World Peace,* 3-37.

Florini, A. (1998). The end of secrecy. *Foreign Policy, 111*, 50-63.

Flyverbom, M., Leonardi, P., Stohl, C., & Stohl, M. (2016). The management of visibilities in the digital age. *International Journal of Communication 10*, 98-109.

Forsa-Umfrage im Auftrag von SAS Deutschland (2011). Soziale netzwerke. Was Bürger von der Verwaltung Erwarten

Fowler, F. J. (2002). *Survey research methods* (3rd ed.). Thousand Oaks, CA: Sage.

Fox, J. (2007). The uncertain relationship between transparency and accountability. *Development in Practice, 17*(4/5), 663-671.

Falconer, C. (2005). Need-to-know is now right-to-know. BBC News. Available from: http://www.bbc.co.uk/1/hi/uk/4142755.stm.

Glennon, M. (2014). *National security and double government*. Oxford University Press

Griffith, J., (1990). Local government contracts: escaping from the governmental/proprietary maze. *Iowa Law Review, 75*(2), 277

Grimmelikhuijsen, S., Porumbescu, G., Hong, B., & Im, T. (2013). The effect of

    transparency on trust in government: A cross-national comparative

    experiment. *Public Administration Review, 73*(4), 575-586.

Gupta, A. (2008). Transparency under scrutiny: Information disclosure in global

    environmental governance. *Global Environmental Politics 8*(2): 1–7.

Hale, T. (2008). Transparency, accountability, and global governance. *Global*

    Governance, 14(1), 73-94.

Hood, C. (2011). From FOI world to Wikileaks world: A New Chapter in the

    Transparency Story? *Governance, 24*(4), 635-638.

Hood, C., & Heald, D. (2006). *Transparency: The key to better governance?* Oxford,

    UK: Oxford University Press.

Jansen, K., Corley, K., & Jansen, B. (2007). E-survey methodology. In R. Reynolds, R.

    Woods & J. Baker (Eds.), *Handbook of Research on Electronic Surveys and*

    Measurements (pp. 1-8). Hershey, PA: Idea Group Reference.

Jesse, N. (2015). Communities: With open-source software towards a vivacious civil

    society. *AI & Society, 31*(3), 361-370.

Kennedy, J. (1961). The President and the press: Address before the American

    Newspaper Publishers Association. Retrieved from:

    https://www.jfklibrary.org/Research/Research-Aids/JFK-Speeches/American-

    Newspaper-Publishers-Association_19610427.aspx

Klassen, R., & Jacobs, J. (2001). Experimental comparisons of Web, electronic and

    mail survey technologies in operations management. *Journal of Operations*

    Management, 19, 713-728.

La Porte, T., Demchak, C., & De Jong, M. (2002). Democracy and bureaucracy in the

      age of the web. *Administration & Society, 34*(4), 411-446.

Lang, M. (2007). Dual-mode electronic survey lessons and experiences. In R. Reynolds,

      R. Woods & J. Baker (Eds.), *Handbook of research on electronic*

      surveys and measurements (pp. 65-75). Hershey, PA: Idea Group Reference.

Licht, J. (2011). Do we really want to know? The potentially negative effect of

      transparency in decision making on perceived legitimacy. *Scandinavian*

      Political Studies, 34(3), 183-201.

Lindstedt, C., & Naurin, D. (2010). Transparency is not enough: Making transparency

      effective in reducing corruption. *International Political Science Review, 31*(3),

      301-322.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods, and

      methodology. *Issues in Educational Research, 16*. Retrieved from

      http://www.iier.org.au/iier16/mackenzie.html.

Marlowe, J. (2004). Part of the solution or cogs in the system? The origins and

      consquences of trust in public administrators. *Public Integrity, 9*(2), 93-113.

Mason, M. (2008). Transparency for whom? Information disclosure and power in

      global environmental governance. *Global Environmental Politics 8*(2): 8–13.

McDermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to knowledge

      sharing. *Journal of Knowledge Management, 5*(1), 76-85.

Meijer, A. (2013). Understanding the complex dynamics of transparency. *Public*

      Administration Review, 73(3), 429-439.

Mohammad, H., Almarabeh, T., & Abu Ali, A. (2009) E-government in Jordan. *European Journal of Scientific Research, 35*(2), 188-197.

Morrel-Samuels, P. (2003). Web surveys' hidden hazards. *Harvard Business Review*, (July), 16-17.

OECD (2003). *The e-government imperative: Main Findings*. Paris: OECD.

Open Source (2016). Retrieved from: http://www.opensource.com

Piotrowski, S., & Van Ryzin, G. (2007). Citizen attitudes toward transparency in local government. *American Review of Public Administration, 37*(3), 306-323.

Porumbescu, G. (2015). Using transparency to enhance responsiveness and trust in local government: Can it work? *State and Local Government Review, 47*(3), 205-213.

Rea, L., & Parker, R. (2005). *Designing and conducting survey research: A comprehensive guide* (3rd ed.). San Francisco: Jossey-Bass.

Reynolds, R., Woods, R., & Baker, J. (Eds.). (2007). *Handbook of research on electronic surveys and measurements*. Hershey, PA: Idea Group Reference.

Roberts, J. (2009). No one is perfect: The limits of transparency and an ethic for 'intelligent'accountability. *Accounting, Organizations and Society, 34*, 957–970.

Roberts, L. (2007a). Equivalence of electronic and off-line measures. In R. Reynolds, R. Wookds & J. Baker (Eds.), *Handbook of research on electronic surveys and measurements* (pp. 97-103). Hershey, PA: Idea Group Reference.

Roberts, L. (2007b). Opportunities and constraints of electronic research. In R. Reynolds, R. Woods & J. Baker (Eds.), *Handbook of research on electronic surveys and measurements* (pp. 19-27). Hershey, PA: Idea Group Reference.

Schaeffer, N. (1992). Interview: Conversations with a purpose or conversation? In P.

 Biemer, R. Groves, L. Lyberg, N. Mathiowetz & S. Sudman (Eds.),

 Measurement errors in surveys (pp. 367-393). New York: John Wiley.

Stember, J. & Schulz-Dieterich, A. (2012). Erfolgsfaktoren für die verbreitung von e-

 partizipation. *Innovative Verwaltung, 34*(1-2), 14-16.

Straw, J. (1999). House of Commons: Column 714, second reading of the Freedom of

 Information Bill, Hansard, London.

Tambini, D., Leonardi, D., & Marsden, C. (2008). *Codifying cyberspace:*

 Communications self-regulation in the age of Internet convergence. UK:

 Routledge

Veal, D., Sauser, W., Tamblyn, M., Sauser, L., & Sims, R. (2015). Fostering transparency

 in local government. *Journal of Management Policy and Practice, 16*(1), 11-17.

Vehovar, V., & Batagelj, Z. (1996). *The methodological issues in WWW surveys*. Paper

 presented at the CASIC conference, San Antonio, TX. Retrievd from:

 http://www.ris.org/casic96/.

Vigoda, E. (2000). Are you being served? The responsiveness of public administration to

 citizens' demands: An empirical examination in Israel. *Public Administration,*

 78(1), 165-191.

Vincent, J. (2102). Neighborhood revitalization and new life: A land value taxation

 approach. *American Journal of Economics and Sociology, 71*(4), 1073-1094.

Whitehurst, J., (2015). *The open organization: Igniting passion and performance*.

 Cambridge, MA. Harvard Business Review Press.

Wozniak, C. (2010). Administrator perspectives of post-secondary educational

opportunities for Michigan high school students (Doctoral dissertation). Retrieved

from:

https://dl.dropboxusercontent.com/u/5550548/WozniakDissertationFINAL.pdf

Zakaria, F. (1997). The rise of illiberal democracy. *Foreign Affairs, 76*(6), 22-43.

Zhang, Y. (1999). Using the Internet for survey research: A case study. *Journal of the*

American Society for Information Science, 51, 57-68.

Appendix A

The following text in this appendix is from the survey that was sent to the target population of public officials. Formatting has not been preserved. The entirety of the survey is displayed in Figure 9, which spans multiple pages.

Thank you for participating in this survey regarding information sharing by county governments. This survey is part of a Master's thesis project and should take approximately 10 minutes to complete.

Taking part in this study is completely voluntary. You are free to stop your participation at any point, and may also skip any questions you are uncomfortable with. The option of filling in contact information is present in the event that you are willing to participate in a follow up interview with the researchers. No personal identifiers will be used in any reports compiled from information gathered in this study.

A printable version of the consent form can be found at this link. Continuing beyond this page confirms your acceptance to the terms of the consent form.

If you have questions or want a copy or summary of this study's results, you can contact Carl Wozniak, the faculty researcher at cwozniak@nmu.edu. If you have any questions about whether you have been treated in an illegal or unethical way, contact the Northern Michigan University IRB chair Derek Anderson at dereande@nmu.edu or NMU's IRB administrator Robert Winn at rwinn@nmu.edu.

You are invited to provide contact information should you desire. This information will not be shared or used in any reports, but it does provide the researchers with a way to contact you if we have follow-up questions.

Name

Email address

Phone

Identify your county

○ Genesee

○ Huron

○ Lapeer

○ Livingston

○ Macomb

○ Monroe

○ Oakland

○ Sanilac

○ St. Clair

○ Tuscola

○ Washtenaw

○ Wayne

What is your role?

☐ Chief executive

☐ Commissioner

☐ County clerk

☐ County treasurer

☐ Sheriff

☐ Other county administrator (please specify)

☐ Other (please specify)

Identify the importance of each of the following tools for getting information to the public.

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Newsletter	○	○	○	○	○
Website	○	○	○	○	○
Public address TV	○	○	○	○	○
Paid print advertising	○	○	○	○	○
Paid broadcast (radio or TV) advertising	○	○	○	○	○
Direct mail	○	○	○	○	○
Facebook	○	○	○	○	○
Twitter	○	○	○	○	○
Direct Email	○	○	○	○	○

Who maintains your county website?

○ Paid internal Information Technology staff

○ Other paid internal staff

○ Paid external or outsourced individual or company

○ Volunteer staff

○ I do not know

To the best of your knowledge, which of the following are available on your website? (Select all that apply.)

☐ Meeting schedules   ☐ Current legal actions   ☐ Hiring notices

☐ Staff schedules   ☐ Staff contact information   ☐ Grant awards and proposals

☐ Meeting minutes   ☐ Current news   ☐ Office hours

☐ Current treasury reports   ☐ Updated notices   ☐ Annual reports

☐ Bidding awards   ☐ Department directory   ☐ Private login area for residents

The following statements concern information provided to your county residents. Please indicate your level of agreement to each statement.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
The public has the right to know all county-related business.	○	○	○	○	○	○	○
It is important that citizens can get county information promptly.	○	○	○	○	○	○	○
County officials' daily calendars should be available to the public.	○	○	○	○	○	○	○
It is easy to find contact information for specific individuals on our website.	○	○	○	○	○	○	○
Our website is updated at least monthly.	○	○	○	○	○	○	○
Our website is easy to navigate	○	○	○	○	○	○	○
We receive a regular (at least quarterly) report about the number of visitors to our website.	○	○	○	○	○	○	○
Our citizens still like to get information by mail.	○	○	○	○	○	○	○
There is information we want to share with residents, but would prefer not to distribute beyond our borders.	○	○	○	○	○	○	○
Our annual report is available in multiple formats (online, print)	○	○	○	○	○	○	○

In your estimation, information about what percentage of the total official activities of the county is available on your website? Move the slider to the value you choose.

	0	10	20	30	40	50	60	70	80	90	100
Percent of total information online.											
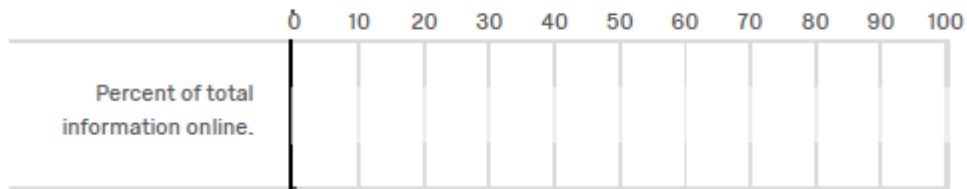
How do you share the following information with the public? Leave a statement blank if you do not know.

	Actively share (public reports or website)	Share when requested	Never share
Personnel salaries	○	○	○
Current legal actions	○	○	○
Past legal actions	○	○	○
Bidding results	○	○	○
Hiring results	○	○	○
Financial reports	○	○	○
Meeting minutes	○	○	○
Community statistics	○	○	○
Elected official daily calendars	○	○	○

The following questions ask you to rate the level of information sharing with and among county employees. Please indicate your level of agreement to each statement.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
A password-protected section of our website is available to employees	○	○	○	○	○	○	○
Departmental meeting minutes are shared with all other departments	○	○	○	○	○	○	○
Department heads hold meetings at least monthly to share information.	○	○	○	○	○	○	○
My department has an efficient process in place to share information with employees.	○	○	○	○	○	○	○
Employees in my department have ample means to bring issues to others in the department.	○	○	○	○	○	○	○

In what way could your county improve how it provides information to residents?

[ ]

Figure 1. Survey questions. This figure contains the survey questions sent to the

public officials in its entirety.

The material in this appendix consist of the figures derived from the data in the study. Figures are charts and graphs to show the relationship between the data and the responses. The figures range from one to nine.
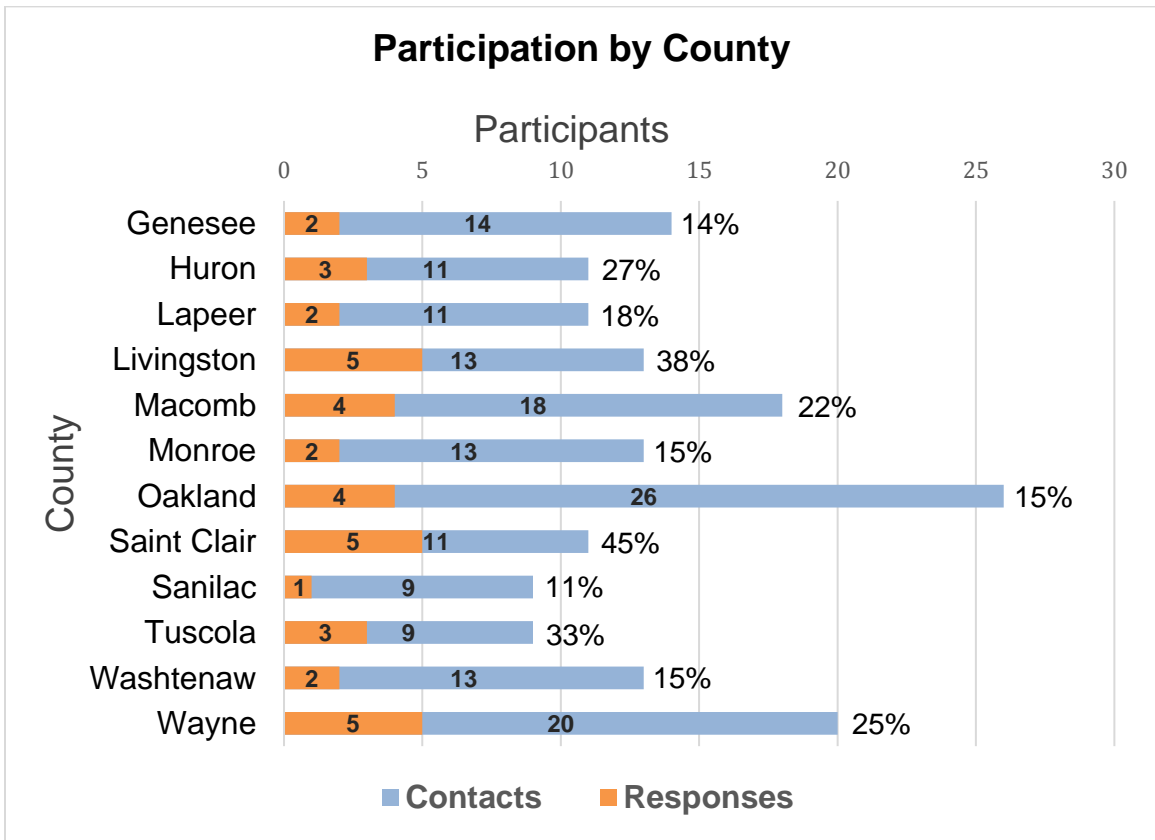

Figure 2. Participation by county. This figure illustrates the quantities of public officials in each county that were contacted, the quantities of public officials that responded in each county, and the percentage rate of responses in each county.
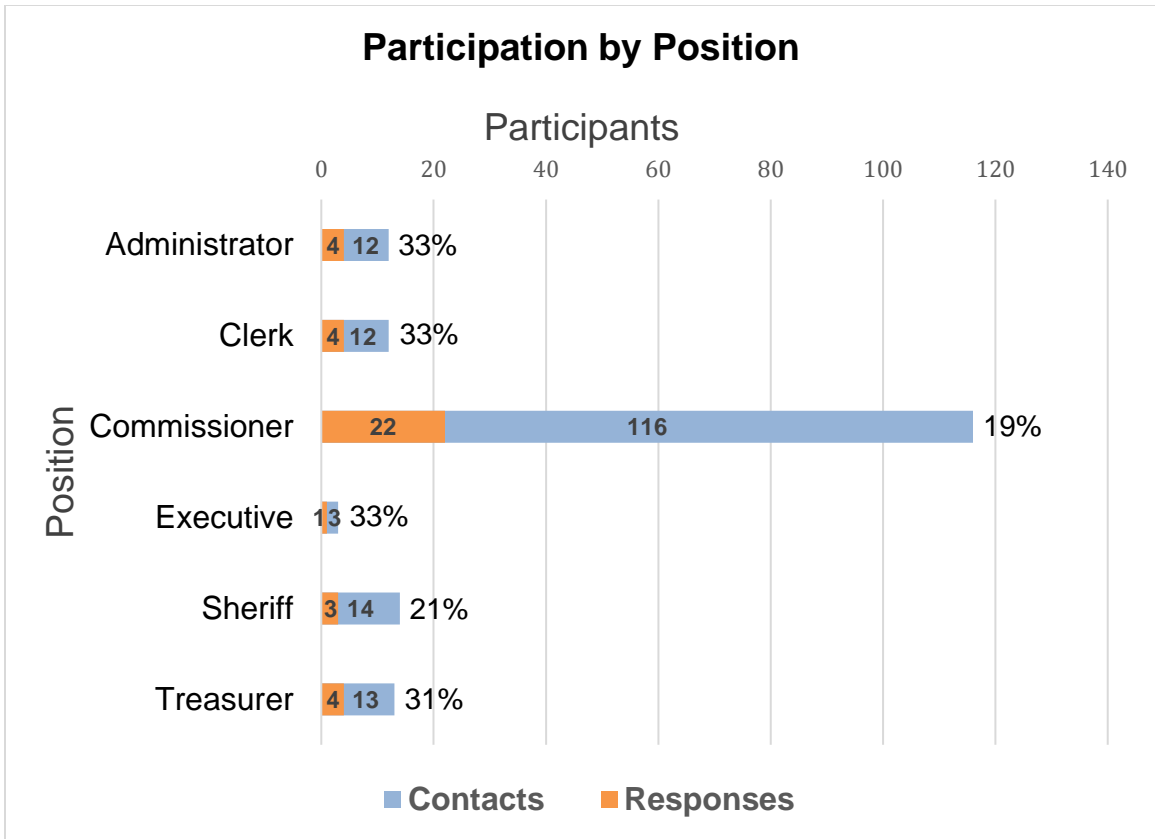
Figure 3. Participation by position. This figure illustrates the quantities of public officials by position that were contacted in all counties, the quantities of public officials that responded by position, and the percentage rate of responses by position in all counties.
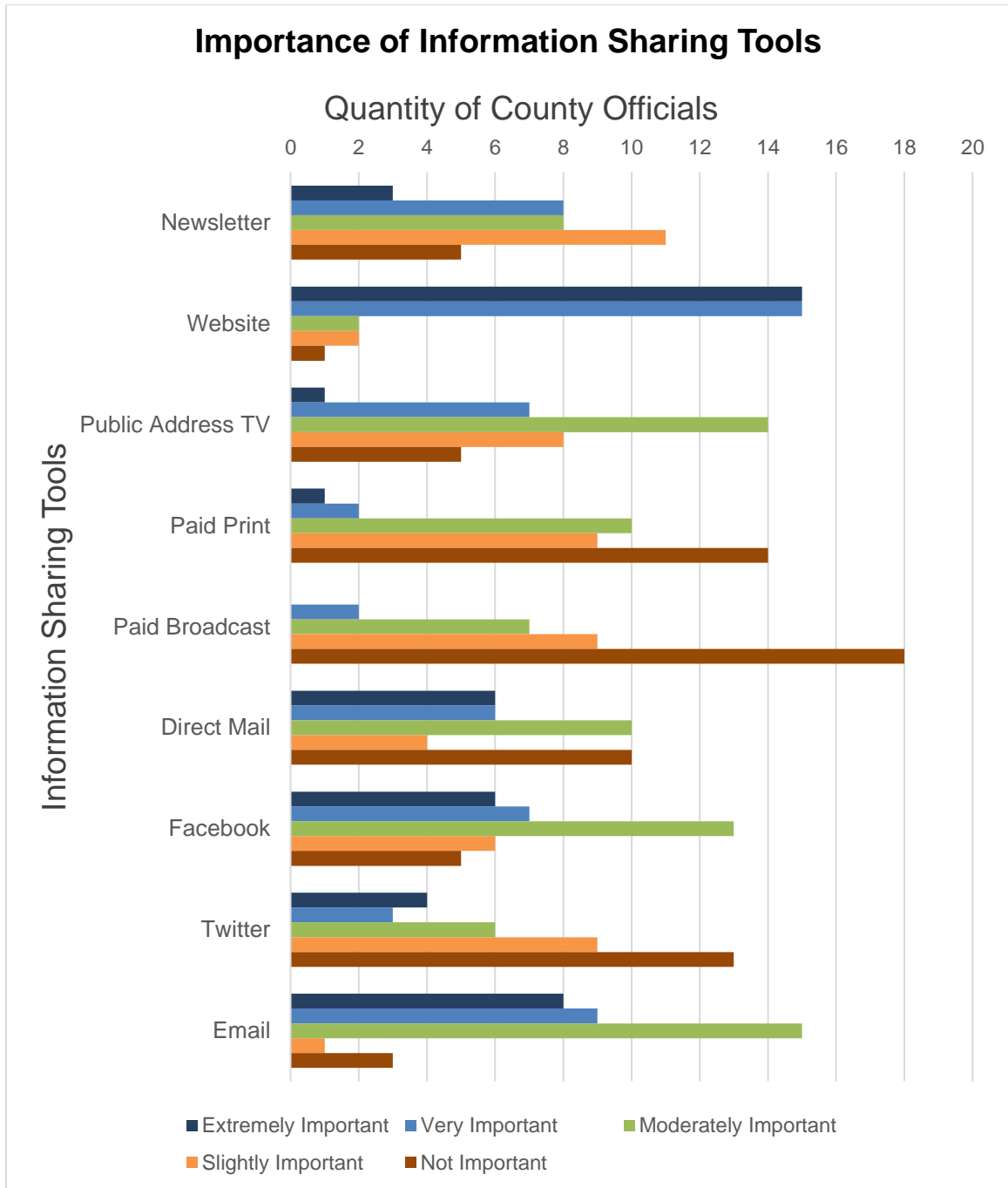
Figure 4. Importance of information sharing tools. This figure illustrates the level of importance of various information sharing tools ranks by county officials.
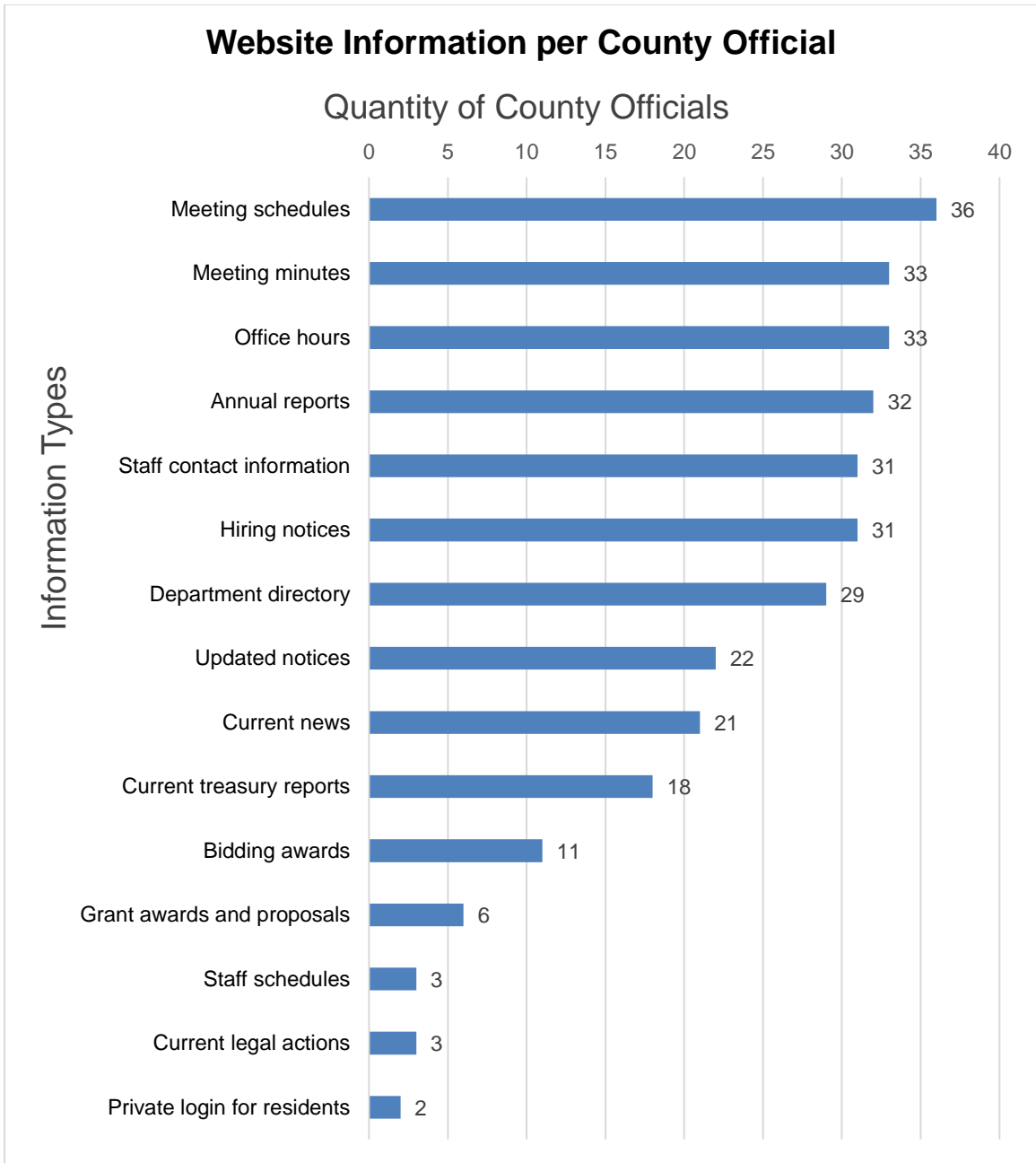
Website Information per County Official

Quantity of County Officials

Information Types	Value
Meeting schedules	36
Meeting minutes	33
Office hours	33
Annual reports	32
Staff contact information	31
Hiring notices	31
Department directory	29
Updated notices	22
Current news	21
Current treasury reports	18
Bidding awards	11
Grant awards and proposals	6
Staff schedules	3
Current legal actions	3
Private login for residents	2

Figure 5. Website information per county official. This figure illustrates the quantity of county officials aware about certain pieces of information available on their county website with data labels on the outside ends.
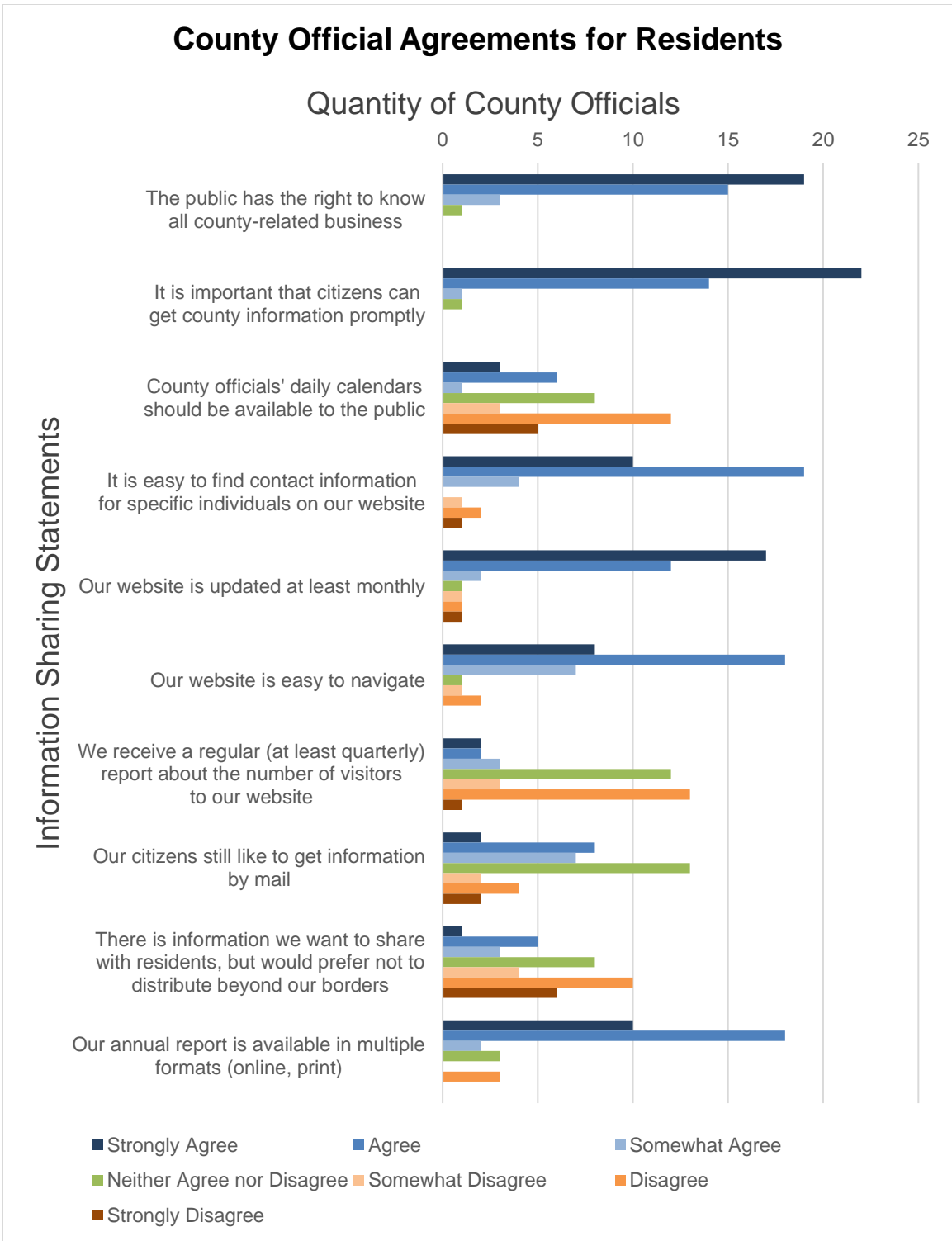
Figure 6. County official agreements. This figure illustrates the quantity of county

officials in scalar agreement with each statement regarding information sharing
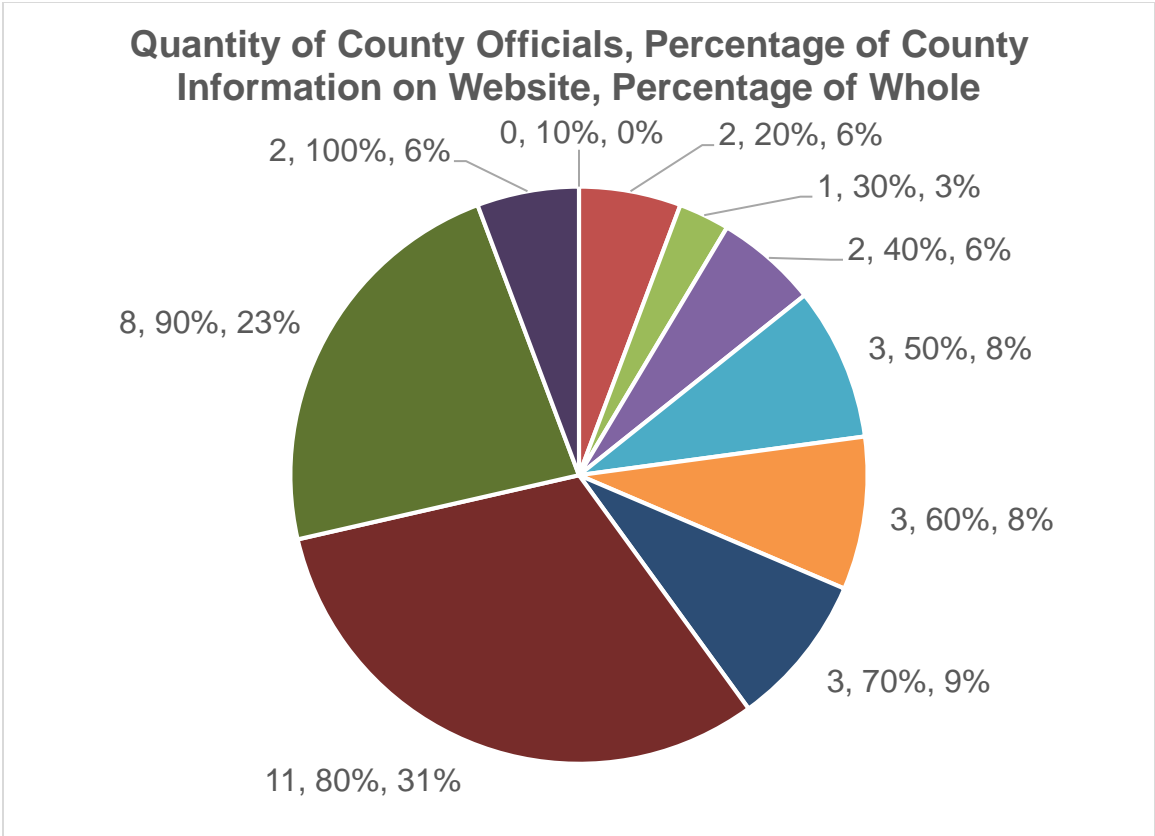
for county residents.

Figure 7. Quantity of county officials, percentage of county information on website, percentage of whole. This figure illustrates the quantity of public officials indicating what they thought is the percentage of county activity information made available on the county website and the percentage of the whole of responses for this question.
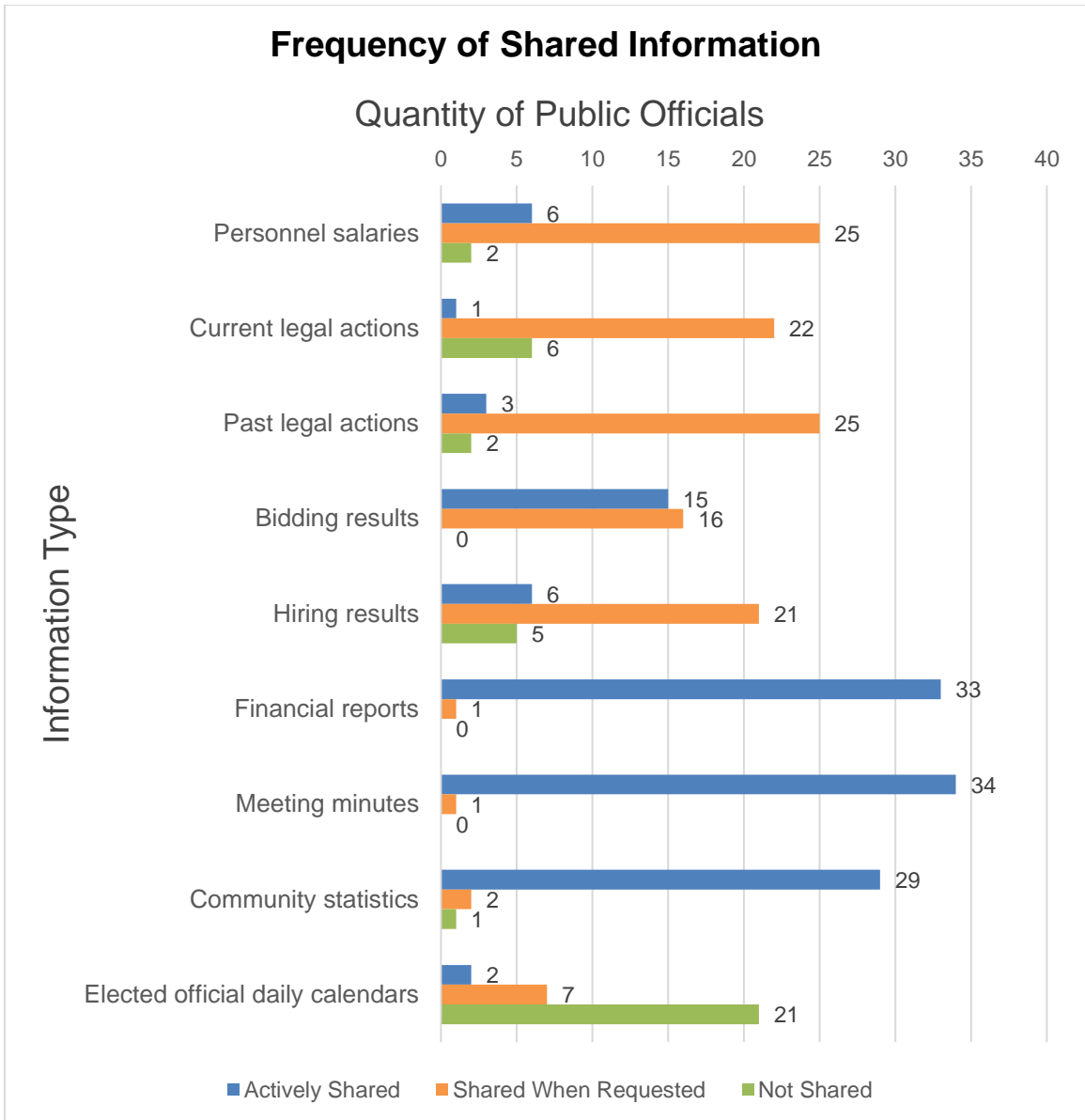
Figure 8. Frequency of shared information. This figure illustrates how often different types of information is shared with the public with data labels on the outside ends.
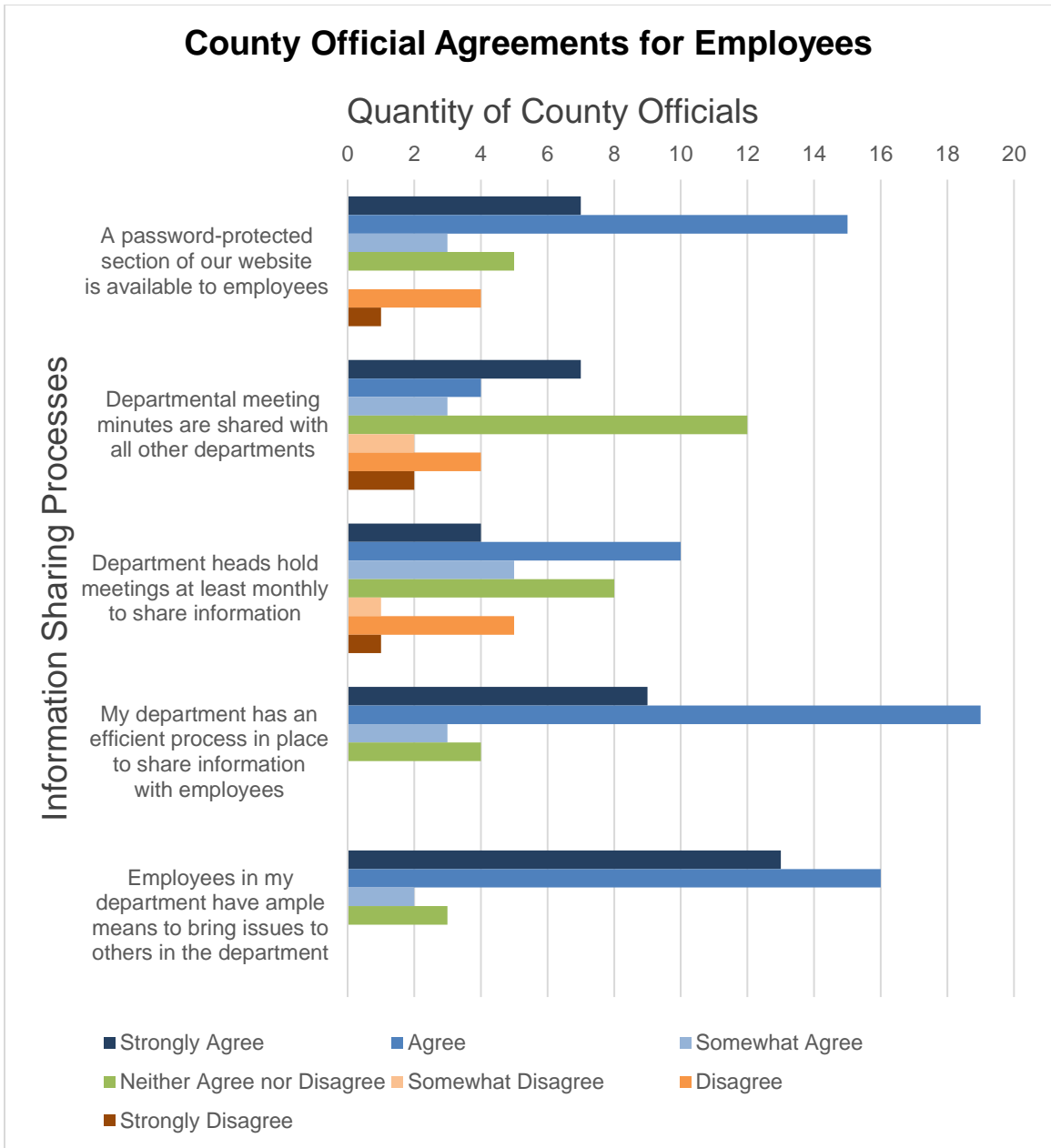
Figure 9. County official agreements for employees. This figure illustrates the

quantity of county officials in scalar agreement with each statement regarding

information sharing for county employees and departments.