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E-Government and the City of Buffalo

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Buffalo State College

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Abstract

As the United States continues to progress, the need for technological innovations has become increasingly important in the field of government. Federal, state and local governments are working towards the implementation and development of e-government practices. E-government began with the Clinton Administration in the mid 2000s, where the administration identified e-government as a way to promote a one stop access to government programs, cut costs and promote citizen advocacy in government (Moon, 2002). The purpose of this study was to explore the different departments in the City of Buffalo that are in charge of creating and implementing e-government projects. These projects are meant to improve and provide the necessary tools to help citizens communicate and request government services within their community. In this study the researcher set out to acquire qualitative interview data from Buffalo City Hall employees that have been involved with the implementation of e-government in the City of Buffalo. The interviews were composed of a series of questions to uncover implementer's perspectives as to where the City of Buffalo stands in the e-government sphere. To validate these findings, a content analysis was performed on the City of Buffalo's main website, their public Open Data website, the Buffalo roam parking app and the Buffalo 311 citizens services app. Findings based on this research suggest that the City of Buffalo is in somewhat good standing when it comes to the e-government implementation; however, there is still room for development.

Keywords: local e-government, City of Buffalo, citizen services

Chapter 1: Introduction

This master's project sought to observe how the City of Buffalo perceives its implementation of e-government. The project will focused on evaluating the four functions of e-government; e-organization, e-services, e-partnership, and e-democracy. The study gained data from Buffalo City Hall departments that had an overall representation of the e-government functions. The departments were 311 Citizen Services, Management Information Systems, the Office of Communication and the Deputy Mayor's office. In addition, the study will also assess government services available through the City of Buffalo websites and applications. The study evaluates the organizational challenges that are most commonly faced in process of adapting e-government such as "infrastructure development, implementation of law and policy, investment on electronic literacy, education on privacy, security, record managing, transparency, and marketing" (Reffat, 2003, p. 11).

In order for municipal governments around the United States to be successful at delivering services to their citizens, they often maintain constant investments in their internal and external delivery structures. Growing technological trends in the private sector have become of great interest to federal, state and local governments, particularly in how they aid in delivering services. With the hopes of implementing such trends, government offices have reached out to private organizations for help. Researchers such as Silcock (2001, p. 88) have highlighted this movement, stating "with the help of big IT vendors, governments are realizing by applying the same principles and technologies that they are fueling the e-business revolution that can achieve a similar transformation." These advancements in technology and e-business provided a perfect example for more cost-effective and easier ways to deliver civic services by improving technological access to those who may live in more remote locations or cannot visit government offices during business hours (Reffat, 2003). Thus, the concept of 'e-government' has formed.

According to Moon (2002), the history of e-government in the United States began with the Clinton Administration in the mid-2000s. President Clinton reportedly delivered one of the first webcast addresses to the country in order to spread awareness of a new program to promote a federal online initiative (Moon, 2002). In his address, President Clinton described the program as an “online services system that put all online resources offered by the federal government on a single website, www.firstgov.gov. The initiative also attempted to build a one-stop access” (Office, 2000). This federal initiative, or first step towards a technological era, created the opportunity for state and local governments to address their common problems in service delivery with the concept of e-government.

With the trend towards e-government comes a renewed sense of urgency in addressing the complexity of ever changing organizational culture in public institutions. According to Reffat (2003, p. 2), “digital government initiatives, of whatever type, are complex mixtures of technological, managerial and policy related challenges. The risk of not understanding and addressing these complexities is costly failure.” Though e-government can be viewed as a cost effective method of public and civic service delivery, a renewed focus on how governments run and process information for its citizens as a business is needed (Reffat, 2003, p. 2). According to Pardo (2000, p. 2) “public leaders must be convinced that digital government requires their serious and sustained attention.”

Public servants and managers must be guided by the concerns of citizens, especially in keeping their information secure. With technological development comes the possibility of leaked private information, whether it is by citizens filling out and submitting forms online with confidential information or using a payment method, such as a credit card to pay for services over the web. With constant news of hacking and identity theft, citizens just want to feel that

what they are doing is safe. Ultimately citizens care for “privacy and security more than they care about access” (Pardo, 2000, p. 5). Unfortunately, public servants seem to be speeding up this transition to e-government with little attention to this security detail or education for the public (Pardo, 2000).

The E-Government Act of 2002 sets aside funds and demands that all government agencies enhance the management and promotion of technology within their systems (Congress:, 2002). The domains of e-government strive to address high process costs and waste, citizen communication and building partnerships with businesses, which are assessed annually by the E-government report under section 3606 (Congress:, 2002). Continued investment in e-government has led to its integration into more local and state government levels.

Chapter 2: Literature Review

Though very little research is available on the evaluation of e-government within the City of Buffalo, its emergence in other major metropolitan areas is not a new phenomenon. Studies have focused on e-government implementation as well as the views of certain officials involved in its management. Some studies have gone into depth to discuss how implementation needs to be done in stages or can be observed through the four functions of e-government; e-organization, e-service, e-partnership and e-democracy. This literature review will discuss these factors related to e-government implementation as well as assessments for e-government and other key domain areas.

Four Functions of E-Government

According to research by Carrizales (2008) and Layne and Lee (2001), e-government is the first modern movement towards public sector reform and improved service delivery to citizens. Unlike most research, Carrizales (2008) chose to focus on cities with populations of 50,000 or fewer, in order to evaluate the practices and trends in more local governments. By administering a survey to municipal chief administrative officers (CAO's) in New Jersey, Carrizales (2008) observed municipal manager's views and influence on e-government. A total of 182 responses were received, with 38.5 percent having an Master's in Public Administration (Carrizales, 2008). Dependent variables were defined as the four functions of e-government; e-organizational, e-services, e-partnering and e-democracy. These functions were tested against managerial and organizational variables (Carrizales, 2008). Managerial variables were based on perspectives of administrative staff and organizational variables focused on the presence of an IT department, a strategic plan, amount of the budget, etc. (Carrizales, 2008).

E-organization is one of the first steps in e-government, and deals almost exclusively with the use of email and intranet to promote internal government communication, efficiency and

effectiveness (Carrizales, 2008; Layne & Lee, 2001). Some researchers refer to this function as ‘cataloging’, which will be described in detail below (Layne & Lee, 2001). Without the presence of electronic organization, municipalities typically find it harder to demonstrate other e-government functions (Carrizales, 2008; Layne & Lee, 2001). Layne and Lee (2001), also argue that e-organization allows for vertical and horizontal communications between separate departments, meaning that lower and middle level employees have equal access to their co-workers as they do to administrators and CEOs within their own department and others (Carrizales, 2008; Iribarren et al., 2008; Layne & Lee, 2001). Through his research, Carrizales (2008) found that the municipalities with fully established IT departments were more advanced in terms of e-organization. Carrizales (2008) also found that municipalities who dedicated a larger portion of their yearly budget to IT development had more advancement. Interestingly, Carrizales found that smaller cities, those with 20,000 residents and fewer, had greater focuses on e-organization than larger cities.

E-services points to the “citizen as a customer” in dealing with technology used for external services, such as a government's efficiency and effectiveness in providing services to the public using electronic means (Carrizales, 2008; Layne & Lee, 2001, p. 126). For example, policy and regulations being available online to the public, applications for licensure or permits available online, and forms being downloaded through municipal websites or being completed online entirely (Carrizales, 2008). Research argues that stronger e-service can reduce distribution costs and production delay within government agencies (Pardo, 2000). Carrizales (2008) found development of e-service to be more advanced in council-manager forms of government than mayor-council forms of government. Carrizales (2008) also found that the presence of a strategic planning in IT departments had a positive relationship with practices in e-service. CAO views were

the final variable discussed, where positive outlooks by CAOs tended to correlate with more advanced practices of e-services (Carrizales, 2008).

E-Partnering is defined as the relationship fostered by technology between government agencies and other public and private organizations such as businesses, nonprofits, hospitals, schools, etc. (Carrizales, 2008). The most prime example of e-partnering can be found at the federal level with relationships between students, loan companies, and educational institutions (Carrizales, 2008). Research has found that in municipalities with strategic planning and positive CAO interpretation of functioning and higher rates of e-organization, e-partnership is thriving. A unique finding reports that municipalities where the CAO was female were found to have more advanced e-partnering and the same was found for CAOs with MPA's (Carrizales, 2008).

E-Democracy is unlike many of the other functions of e-government because rather than promoting organization, service delivery, or partnerships, it is focused solely on increasing public interest and participation in government (Carrizales, 2008). Government officials have taken notice that internet services give citizens a new platform to demand and receive information (Carrizales, 2008). Research states that e-democracy will allow for transparency, accountability and reduce government corruption (Carrizales, 2008). Carrizales found that having a mayor-council municipality lead to less investment of e-democracy and the opposite was found for CAO's who viewed their municipalities as strong in e-organization. Carrizales went on to suggest that CAO's who were most comfortable with the internal workings of their municipality felt compelled to "advocate for advanced democratic practices" (Carrizales, 2008, p. 24).

This study is beneficial but it seems to be focused mainly on larger municipalities, which can be seen as a limitation. Researchers also mentioned that the study was "limited to examination of performance of e-government functions and lacked analysis of municipal managers' views and

influence” (Carrizales, 2008). Results of the study portrayed higher levels of e-organization in municipalities with well implemented IT department (Carrizales, 2008). Additionally, e-services proved to be enhanced in municipalities with full support of council-managers and e-partnership was found to be most successful when strategic plans are set to deliver citizen services (Carrizales, 2008). Lastly, e-democracy was found to decrease in municipalities run by Mayors as opposed to city council run municipalities (Carrizales, 2008). This study relates to the current research project due to its focus on the four e-government functions, which aid in the study’s determination of e-government implementation and maturity.

In order to properly identify the implementation and maturity of e-government on a federal, state or local level, this writer has reviewed assessment tools in research. The following studies will reflect on current models of implementation and assessments, common success factors, changes/challenges in the field, managerial orientation and organizational change and maturity models of e-government.

A Four-Stage Model of Implementation

Layne and Lee (2001, p. 123) observed that most implementation of e-government seems to be moving too slowly and described the processes as “chaotic” and “unmanageable” despite federal initiatives to get the ball rolling. Due to this, the researchers attempted to create a more manageable step system, or growth model, for e-government implementation based on their experiences with e-government in America (Layne & Lee, 2001). The growth model consisted of four stages; catalogue, transaction, vertical integration and horizontal integration (Layne & Lee, 2001).

The first stage created by Layne and Lee (2001, p. 124) is known as ‘catalogue.’ This had to do specifically with becoming organized enough to establish an easily navigated “online

presence.” Researchers mentioned how citizens were pushing the idea of indexing all government data on one website (Layne & Lee, 2001). They also found that citizens were more likely to participate in e-government if forms were made easily available via download from this localized website (Layne & Lee, 2001). The second stage of Layne and Lee (2001) model is transaction-based where citizens would be able to pay for services attained on web based landscapes. “At this stage, e-government consists of putting live database links to online interfaces” (Layne & Lee, 2001, p. 125). An example of this would-be citizen access to paying fines and renewing licenses online (Layne & Lee, 2001). Layne and Lee (2001) discuss how demand for these e-transactions may call for interfaces to be directly connected to the government’s own intranet, ultimately leading to minimal interaction needed by government staff.

The final stages for e-government implementation, as described by Layne and Lee (2001) are vertical and horizontal integration. Vertical integration refers to communication working itself up the ladder from local, state and federal governments. An example of this would be if a business license were obtained at the local level from a web based system which would then be vertically transferred to the state and federal level through the internet to produce an employer identification number (FEIN) (Layne & Lee, 2001, p. 125). Horizontal integration, on the other hand, would work across different services. According to Layne and Lee (2001, p. 125) “an example would be a business being able to pay its unemployment insurance to one state agency and its state business taxes to another agency at the same time because systems in both agencies talk to each-other.” This study provides the proper assessment tools for categorizing information on how e-government functions, and how the different stages of implementation should be viewed.

Andersen and Henriksen (2006) set out to propose a maturity model that differs from the Layne and Lee (2001) Model of vertical and horizontal integration. Andersen and Henriksen (2006) model involved the integration and proposed improvements of IT departments. The model was called Public sector Process Rebuilding (PPR) and focused on conceptualizing and assessing key agencies, like IT departments, that are in charge of development of effective local e-government (Andersen & Henriksen, 2006) The PPR maturity model can be viewed as an alternative framework of assessing if local e-governments are on the right track of developing proper IT infrastructures and proper user interface. In the PPR model, the focus is on restructuring the delivery of e-government services (Andersen & Henriksen, 2006).

The PPR Model consist of four phases with the first two being cultivation and extension. The first phase focuses on creation and adoption of intranet, and horizontal and vertical integration within the government. It also provides an evaluation of front-end interface for citizens. The second phase, extension, further expands on the intranet by being able to personalize user web-interface for government officials (Andersen & Henriksen 2006). The third phase, maturity, highlights accountability and transparency of government agencies and their activities (Andersen & Henriksen, 2006). The fourth phase, revolution, offers total data mobility across organization, application mobility across all vendors and ownership of data transfers to customers (Andersen & Henriksen, 2006). In this study, Andersen and Henriksen (2006) stressed that phases occur simultaneously, rather than in sequential order, due to the continuous development which occurs within all agencies pursuing an e-government process.

Using the PPR model, the study set out to assess 110 state agencies and boards in the country of Denmark. The assessments were based off their prospective websites. The limitations of the study involved data mobility for businesses, citizens and public organizations. The

assessments found lack of mobility involving data application levels, which ultimately left customers dependent on locked-in servers that were only accessible by one agencies website (Andersen & Henriksen, 2006). This lack of innovation towards the fourth phase of the PPR model has led to a decrease in developing better IT applications within their local governments. The key findings in the study are connected to the four phases of the PPR model. For instance, the cultivation phase found that 80 percent of agencies had a profound increase in investments of developing new avenues of government services for citizens (Andersen & Henriksen, 2006). Some examples of this were the establishment of better call centers, more user-friendly websites, the ability to schedule meetings online and the overall improvement between small areas of communications within agencies. The findings in the second phase, extension, found that government employees had become accustomed to handling complaints and providing links to government forms that could be downloaded online. Many of the websites were found to be more customer-oriented, and less focused on the development of IT applications. In the third phase, known as matured phase, it was found that many agencies had been focusing on digitizing request activity and forms instead of focusing on the development of their IT database.

This study illustrates how local governments need to continue to address their IT departments, and continuous enhancements, in order to promote e-government. Though being user-friendly is a positive attribute, an IT department would need to be strong in order to ensure a smooth transaction of data between government, citizens and separate businesses. The PPR model provides a contrasting viewpoint from the Layne and Lee (2001) model of maturity. This model will help the researcher identify key aspects of e-government implementation, such as the perceived presence of a strong IT department in the City of Buffalo.

Assessment and Success Factors

The success and implementation of new technologies tends to depend on the tools program managers utilize to assess and evaluate them. Newcomer and Caudle (1991) attempt to focus on these assessments as well as public sector access to technological advancements. The researchers focus on answering the following three questions with available literature on information technology systems. The first question revolved around issues of addressing how the general design of IT systems affects the public sector, the second question addresses the way we define IT systems based on their characteristics in government and the third question addresses how users perceive the accessibility of IT systems in the public sector (Newcomer & Caudle, 1991). The study's findings describe how the notion of good evaluation would need to focus on the challenges of having good IT system decision makers within the field, specifically those that have a good aspect of applying positive value towards improving usability within IT systems (Newcomer & Caudle, 1991). These findings represent a sort of limitation in terms of decision makers. A decision maker's individual point of view can be focused on one issue and disregard other problems within IT systems, therefore multiple decision makers or overseers are needed to fix IT systems (Newcomer & Caudle, 1991). This study is related to the project at hand due to its focus on evaluation of information systems. In order to be properly prepared to implement e-government, municipalities must be able to first evaluate their current information systems. The project at hand will assess e-government's perceived presence, but questions will also be asked to determine if the current system is an adequate environment to foster e-government.

Gil-García and Pardo (2005) attempt to observe tools to better assess the success of proper e-government implementation. Garcia and Pardo looked into past research to determine these success factors. They utilized a gap-analysis to compare five components, "information and

data, information technology, organizational and managerial, legal and regulatory and institutional and environmental” (Gil-García & Pardo, 2005, p. 190). The most notable success factors were found to be the presence of government resources or funding and a plentiful supply of e-government practitioners or IT staff members (Gil-García & Pardo, 2005). Gil-García and Pardo (2005) stated that the more of the aforementioned components a municipality had, the more successful their e-government implementation would be. The findings of the study address how overcoming issues such as information and data reliability, outdated information technology and organizational/managerial difficulties can help practitioners develop a better understanding of information technology systems. Gil-García and Pardo (2005) pointed to the overall lack of implementation tools, or initiative guides, serving as a major challenge in implementing new e-government functions. The study finds numerous success factors in properly implementing e-government systems. Some examples are as follows; a balance of steady financial resources, innovative project managers and a constant need for new e-government development. The current project will evaluate if the City of Buffalo has successfully obtained mayoral and city council support for financial needs and the active participation of project managers in e-government initiatives.

Incremental Change and Challenges

Norris and Reddick (2013) review literature searching for incremental changes in e-government spanning from its first introduction in 2002 to 2013. The researchers discussed findings of two surveys given in 2004 and 2011 that addressed the differences in state and local e-governments in the United States to earlier predictions in writing (Norris & Reddick, 2013).

The researchers contracted with the international City/County Management Association (ICMA) to conduct surveys on e-government with local municipalities in the United (Norris & Reddick, 2013). The survey was meant to highlight how incremental or trans-formative local e-government has been over time. The sample was based off of municipal populations, large medium and small, types of governments like city or county, and form of government like mayor-council or council-city managers (Norris & Reddick, 2013).

Researchers found that local e-government had changed incrementally over time, however it had not been transformative (Norris & Reddick, 2013). Norris and Reddick (2013) found that local e-government only focused on developing better forms of service delivery and access to information while disregarding forms of e-democracy and e-partnership (Norris & Reddick, 2013). The study found that by 2004 nearly all forms of local governments, of any size, focused mainly on providing information and services. These two functions of e-government being neglected can be related to the limitations that exist in the study. For example, one of the top barriers mentioned amongst all local governments in the study was the lack of financial resources, which is known as one of the many challenges within the implementation of local e-governments (Norris & Reddick, 2013). Dealing with some of these challenges and limitations leads to prioritization of only some functions of e-government. This study relates to the project at hand because it highlights the most glaring challenge of e-government implementation, being financial constraints and issues with budgeting. The City of Buffalo was allotted three million dollars for the MIS department and it would be interesting to see if they have a similar problem where implementation seems to be mainly in e-organization and e-services (Brown, Ball, & Estrich, 2016).

Local municipalities remain the focal point within the field of e-government, representing the hopes and aspirations of being more cost effective with the delivery of services. The idea behind e-government not only represents technological advancements within a society, but cost-effectiveness and a highly reliable form of government that can be available 24/7 through its electronic systems. Moon (2002) focuses on the rhetoric that e-government offers and aims to examine if local municipalities have met all the promises electronic services have been said to offer. The study aimed to analyze two institutional factors of size and type of government (Moon, 2002). The data used was generated through the distribution of 2,899 surveys to municipalities with populations over 10,000 people (Moon, 2002). These surveys focused on the government website adoption, interactive service delivery, electronic delivery of community services, and other key functions of e-government (Moon, 2002). There was a total of 1,471 respondents to the survey, with a representative population of 51 percent.

The findings of this study demonstrate that adoption of e-government in local municipalities exists, but has not been able to deliver on its promises of being a cost-effective measure of delivering government services to citizens (Moon, 2002). Findings also illustrate that larger forms of government tend to be more proactive on new e-government initiatives, due to the availability of funds and overall need of innovations for better forms of citizens services (Moon, 2002). The final finding listed noted how a council-manager form of government is better than a mayor-council form when it came to implementing higher initiatives of e-government (Moon, 2002). This is due to council-managers presenting as more involved in innovation on making local governments run more efficiently with the proper use of available funds. According to Moon (2002) mayor-council demonstrate less innovation and

implementation towards e-government functions, thus creating stagnation within the local government services.

The survey also addressed if there were any future aspirations for those municipalities that have not yet adopted some form of e-government. The results showed that non-adaptors do share positive optimism towards implementing web-based forms of services to its citizens in the future (Moon, 2002). The limitations of the study relate to an overall lack of financial capabilities that exists amongst all municipalities and, at times, a lack of technical personnel (Moon, 2002). This study is relevant to the project at hand because it highlights aspects of a successful e-government as well as possible challenges in implementation. If not properly implemented e-government can be viewed as an extremely expensive form of government. With proper managerial staff and overseers, the functions of government can strive and provide the rhetoric of being a cost-effective way of government.

Managerial orientation and organizational change

Moon and Norris (2005) approach the concept of managerial innovation within the sphere of local municipalities. Their study focuses on the way e-government managers take initiatives in adopting new forms of e-government, with a key focus on analyzing its outcomes (Moon & Norris, 2005). Their study was conducted using a quantitative method that relies on two databases of surveys; one survey which was administered in 1997 and focused on the reinvention of government and another which was distributed in the year 2000 focusing specifically on e-government (Moon & Norris, 2005). In order to identify how managers have continued to adapt to changes, these surveys focused on how web-sites, electronic delivery of services and the community have been imposed as new initiatives by IT managers (Moon & Norris, 2005).

The findings demonstrate that city size matters when comes to giving managerial staff space to be innovative (Moon & Norris, 2005). The larger the municipality the more accepting and adapting the city is towards new managerial innovations and the more managerial innovations are seen. The opposite was found for smaller municipalities. Municipalities that have a smaller population size tend to be more resistant to change, and therefore managers tend to abstain from innovation on change such as e-government (Moon & Norris, 2005). This aspect also tends to serve as a constraint within the study of how managers are able to implement change. Municipalities with larger populations tend to have more of an incentive to be adaptable to new managerial innovations (Moon & Norris, 2005). This study relates to the project at hand due to its explanation of managerial influence on change and e-government initiatives. The City of Buffalo is relatively large, with an MIS department of 26 individuals so it would be interesting to see if e-government is more prevalent in the city partially due to city size and managerial innovation.

Public organizational change is a consequence of decision-making and implementation strategies of managers within the public sector. Fernandez and Rainey (2006) focus their research specifically on the tools managerial staff use to successfully implement organizational change within the public sector. The method used in this study was an analysis of eight factors that have been prevalent in past research. The eight factors were ensure the need, provide a plan, build internal support for change and overcome resistance, ensure management support and commitment, build external support, provide racecourses, institutionalize change, and pursue comprehensive change (Fernandez & Rainey, 2006). The findings of this study suggest that these factors would serve as the perfect road map or guide of public organizational change due to the improvements towards educating employees, and giving managers better resources. However, a

limitation in the study is that these factors remain untested within the public sector. This study is relevant to the project at hand because it provides a framework for implementation which may or may not have been followed. If the City of Buffalo's perceived e-government implementation is low, this framework, among others, can be shared with them.

Evaluating Readiness and Perceived Challenges

Though e-government has been mandated by higher offices, little has been done to evaluate the overall readiness of municipalities for such a vast change and challenges have been overlooked (Iribarren et al., 2008; Valdés et al., 2011). Through research already mentioned, we learned that e-service, e-partnership and e-democracy are rarely obtained in municipalities who did not already achieve all of the markers of e-organization (Carrizales, 2008). In order to properly implement e-government, evaluating readiness and discussing challenges is a must.

E-Government Maturity Models

Valdés et al. (2011) is one of the many researchers who mentioned a maturity model (eGov-MM) evaluation for e-government. The eGov-MM model is essentially an integrated assessment to evaluate technological, organizational, operational and human capital capabilities to produce an absolute maturity level (Valdés et al., 2011). Valdés et al. (2011) administered an assessment to 30 public agencies in Chile and to over 100 public officials. The assessment found that the average organization maturity level of the Chilean public system is at a two, meaning it is currently developing (Valdés et al., 2011). The limitation mentioned in this study deals with the lack of government support or sponsorship in implementing e-government (Valdés et al., 2011). In terms of relevance to this project, it would be interesting to see if the perceived function of e-government in the City of Buffalo is low due the city not being particularly

prepared for full implementation. This may leave room for future research based on the results of the study at hand.

Iribarren et al. (2008) also discusses the evaluation of e-government using the eGov-MM but focuses on collecting data specifically from IT-based personnel in government. Instead of evaluating the factors mentioned in Valdés et al. (2011), Iribarren et al. (2008) tweaks the tool to evaluate three main dimensions; information criteria, IT resources and leverage domains. The leverage domains are identified as logical groupings of key domain areas (KDAs) which correspond with capability levels and maturity levels of municipalities (Iribarren et al., 2008). The assessment was developed in order to identify best practices in e-government as well as to provide a “standard structure of a CMM (Capability Maturity Model) for governments worldwide” (Iribarren et al., 2008). In their findings, researchers mention how the assessment can be used to verify the need for strategic planning and strong IT investment. This reading offers a separate view of the eGov-MM supporting that it is still a work in progress and has not been fully implemented as a global evaluation technique as of yet.

In order to evaluate e-government, Cloete (2003) aimed to utilize electronic policy support tools, which would eventually promote service delivery and accountability. Cloete (2003) highlights how his study does not guarantee success of e-government implementation but, instead, supports that certain tools will promote the potential for success. According to Cloete (2003, p. 284) technological advances have led to a “well-developed and successful policy system to monitor, coordinate, implement and assess the effectiveness of policy implementation programs... an increasing reliance on more user friendly, less technically complicated, more visual - and command-driving systems.” Cloete (2003) focused on reviewing past literature in order to determine findings. Some main concepts evaluated were simplicity, scientific rigor, cost,

compatibility, versatility and flexibility, specificity, transparency, visual images, and access and maintenance (Cloete, 2003). Findings suggest that the use of only one concept or tool does not promote the success of managerial implementation towards new forms of e-government. (Cloete, 2003). Cloete (2003) did find that certain administrators or public servants were lacking in education and training in policy management measurement tools. This study is relevant to the research at hand due to its focus on the vast measurement tools that exists within the field of electronic management, and how these tools can be conceptualize in the public sector. It also provides an alternative assessment to the eGov-MM.

Kim, Lee, and Kim (2009) set out to evaluate the Public Sector Process Rebuilding Model created by Andersen and Henriksen (2006). The researchers were hoping to develop an understanding of the connection between stages of development, demands and collaboration within local governments. The study begins by focusing on the three stages of the PPR model; initiation, application development and integration (Kim et al., 2009). Stage one deals with the initiation of e-government and local official's motivation towards innovation and ideas for government services which could be easily made electronic. Stage two, application development, is where continuous development and ongoing improvements are analyzed in e-government. (Kim et al., 2009). In this stage, government officials tend to concentrate on the demand for e-government services by businesses and citizens. This demand typically leads to an increase of e-government services in terms of communication, the flow of money and the flow of personal citizen information (Kim et al., 2009). The third stage, known as the integration stage, evaluates the barriers between agencies that should be working together, and breaking them down in order to improve e-government efficiency. This stage sets out to make all e-applications and online transactions available to share in "real-time and transparent information within a local

government and across different levels of government” (Kim et al., 2009, p. 39). These stages can be compared to the Layne and Lee (2001) model, in which stage two of e-applications and development is similar to the transactional stage model. Also, the third stage of integration seems similar to the vertical and horizontal integration of the maturity model.

The study consisted of a collection of data from e-government projects done at the University of Syracuse and Korean University. One data set collected was from government employees at Gangnam-gu local government, where researchers completed “40 semi structured interviews, including project leaders, sponsors, initiators, and executive champions as well as staff responsible for different aspects of the project such as technology infrastructure, marketing strategy, legal affairs and human resources” (Kim et al., 2009, p. 42). Surveys were also conducted in 15 additional governmental departments such as social welfare, which had 492 employees. The limitations of this study point to issues of designing and supporting how information is shared between local and federal governments. “Poor understanding of the importance of intergovernmental partnership and collaboration for local e-government development caused one-way communication initiated” (Kim et al., 2009, p. 43). One limitation observed by researchers was the hierarchical structures that existed between local and federal employees did not allow for collaboration.

The agencies within the local government would adapt to the high demand of its citizens needing services by collaborating and focusing on e-applications, or continued developments to enhance e-government (Kim et al., 2009). The third stage of e-government integration would allow agencies to align their e-government goals to other agencies in order to tackle issues and demand of services. This study connects the potential limitations that could be occurring within the City of Buffalo. It explores how collaborative efforts of agencies can be stuck in a stand still,

or fully committed to a steady stream of information that can be effective for citizens and businesses. The PPR model can help evaluate if the City of Buffalo has achieved any of the three stages, and if it has encountered collaboration issues between state and federal governments.

In order to further explore e-government maturity measurements, this writer looked into research by Windley (2002) who evaluated maturity in the state of Utah. Windley (2002) utilized the Capability Maturity Model (CMM) to evaluate, rather than the PPR model. The CMM model focuses on the concept of initiating services, implementing, quality, process, and continuous development of e-government services. It provides an option to categorize the level of e-government development. The CMM model starts off by evaluating the concept of having an online presence, beginning with a website. The first stage, known as “Level 1: Simple website” evaluates factors presented on the website and its design. For example, Level 1 would evaluate the lists of departments, policy statements and downloadable forms and documents on the website (Windley, 2002). Level 2 of the CMM model consist of government being fully available and accessible online. The focus is to have limited face-to-face interaction with citizens due to their ability to seek information online. Level 2 of the CMM model maintains a departmental focus, provides online forms for applications and registrations, and states the ability to request information of services via email or phone (Windley, 2002). Level 3 involves integrated government, where e-government is synced with the municipality. Active sharing of information and communication does not have limits within departments. This allows processes between citizens and e-government services to be easily used. This level offers web-based training, a self-service Human Resources administration, and other processes like automated advice and problem resolution data (Windley, 2002). The 4th and final phase of the CMM model is known as ‘transformed government.’ This focuses specifically on offering services that have

been set to be improved through surveys and ideas citizens have offer towards developing better online mechanism.

The article sets out to evaluate what level the State of Utah's e-government falls under within the Capability Maturity Model. According to the article, the State of Utah's e-government falls within Level 2 of the CMM (Windley, 2002). They have not been able to break into the level 3 stage due to boundaries that exist between the agencies when sharing information Other limitations found involved the inability to analyze, track or report online government issues within departments. As described in the article, "online government is about each agency doing their business online. Integrated government is about removing those organizational boundaries" (Windley, 2002, p. 4). The Capability Maturity Model serves a key role in identifying where an organization stands with their e-government development. The CMM model could be used as a measurement tool to identify where the City of Buffalo stands and what processes it has in place to continue the enhancements of their e-government infrastructure.

Much like Windley (2002) four stage model, West (2004) also proposed a four-stage model of e-government development. In West's model, the first stage is known as the billboard stage (West, 2004). In this stage, government websites are viewed as digital billboards with the intention of only posting generic government information (West, 2004). This gives citizens limited participatory access to actions being taken by elected officials and government projects online. The second stage, which is known as the partial service delivery stage, focuses on how e-government structures allow citizens to utilize the online tools provided through a more developed website (West, 2004). This stage gives citizen users the ability to look up specific information at their will, with no interference of government entities. These two stages are similar to the first two stages of the CMM, in which the development of government services and

interaction increases between citizens and government agencies. The third stage illustrated by West (2004) focuses on the portal. The portal stage serves as a one-stop-shop for citizens, which gives them the ability to access information from city and state agencies West (2004). Much like the study of the CMM level three stage, West (2004) third stage shows how agencies are freely communicating with one another, without any boundaries or limitations. The fourth stage, known as the interactive democracy, involves public outreach and accountability enhancing features within e-government (West, 2004). West (2004), not only focuses on an e-government delivery service model, he also focuses on implementing systems online.

The fourth stage also utilizes its online tools to transform political aspects of government from agencies and participating citizens (West, 2004). This stage allows citizens to fully customize service request of specific information through online tools, either by a website or mobile app (West, 2004). Through these means of customization, information and delivery of services for citizens can provide input for areas that need improvement. This could strengthen aspects of their e-government structure (West, 2004). This final stage also allows, for e-government democracy to become fully enhanced due to constant feedback and responses between citizens, businesses and government agencies (West, 2004).

West (2004) sought to investigate if his model of maturity was able assess “e-governments effective service delivery, democratic responsiveness, and public opinions about government” (West, 2004, p. 18). The study distributed e-mail surveys to all 50 state governments in the U.S. The surveys were also emailed to 38 major federal agencies (West, 2004). The surveys asked about the viewpoints of information officers and their attitudes in regard to the impact e-government services they oversee (West, 2004). The surveys showed that “86 percent felt e-government had already improved service delivery, 83 percent believed it had

made government more efficient, and 63 percent claimed it had reduced government cost” (West, 2004, p. 22) This created a limitation within the study, due to the results being based on individual opinions, which can promote bias views of government programs. West did not appear to provide supporting research from websites, budgets or figures or service delivery data in order to compliment these opinions (West, 2004). This study further expands the tools of maturity to identify if the City of Buffalo has made any advancement in their e-government structures.

Overall, there are a number of evaluation tools for e-government presented in the literature. Most prominent were the Layne and Lee Model, the Carzilles Model, the PPR, the eGov-MM and the CMM model. This researcher chose to utilize Carzille’s four functions of e-government to evaluate the perceptions of e-government implementation in the City of Buffalo. Survey questions from Carrizales (2008) were adapted for the study at hand.

Chapter 3: Methodology

In this study the researcher set out to acquire qualitative interview data from Buffalo City Hall employees that have been involved with the implementation of e-government in the City of Buffalo. The interviews were composed of a series of questions, which were set to uncover implementer's perspectives as to where the City of Buffalo stands in the e-government sphere. To validate these findings, a content analysis was performed on the City of Buffalo main website, their public Open Data website, the Buffalo roam parking app and the Buffalo 311 citizens services app.

Selection and recruitment

In order to identify the best candidates for this study, the main contact at Buffalo City Hall (the confidential aide to the Mayor), provided a list of 10 potential individuals with ties to e-government. The positions these individuals held were based on the four functions of e-government implementation; E-services, e-partnerships, e-organization and e-democracy. Three employees from 311 citizens services; one director, one manager and one office employees were selected. Three employees were from the department of Management Information System; one chief information officer, one supervisor, and one systems support analyst. Three employees from the Office of Communications; one being the commissioner, one press information officer and one digital communications officer. Lastly, one project manager from the deputy mayor's office was also chosen to be included in the study. In order to avoid under representing City Hall employees that are involved with any type of e-government, the sample selection consisted of four different departments and three different positions, with the goal of getting an overall representation of each subgroup.

The first round of emails were sent out on March 16th by the confidential aide to the Mayor. A total of ten emails were sent with a response rate of 50 percent agreeing to schedule an

interview. Five responded directly to the emails, requesting the best time to meet. The other five employees did not respond to the initial email. A second round of follow up emails were sent out to the five employees by the confidential aide to the mayor on March 23rd. Out of those five employees that were invited, one of those employees responded to the researchers contact and replied with a “No.” The other four invitees did not respond to the follow-up emails. Based on this process, a total of five interviews were scheduled and conducted. The sample population consisted of three directors/managers, and two office employees.

In-depth interviews were used as a methodology to acquire data. The method consisted of one on one, face to face, in person interviews (Creswell, 2014) This qualitative method allowed the researcher to assist participants with questions they did not understand, it also allowed the researcher to ask participants to elaborate on responses they have given and provide additional background information on the topic at hand (Creswell, 2014, p. 241). The qualitative interview method would acquire open-ended answers, which would give a better understanding of the opinions in their specific departments. This researcher decided not to do surveys because they are limited to statistical data (Creswell, 2014, p. 204). The weaknesses of having face to face interviews could be due to interviewer bias and interviewees perception and opinions of their own workplace (Creswell, 2014, p. 241). To overcome this limitation, a content analysis was conducted on the City of Buffalo websites and apps, in order to validate the information being acquired from the interviews.

In order to conduct interviews at employee’s offices, this researcher had to submit a site agreement form the Law department at Buffalo City Hall on March 8th. On March 14th, the researcher received notice from his contact, the confidential aide to the Mayor, that the study was approved. This approval affirmed that the researcher could conduct and acquire data on City Hall

property. Also on March 8th, the study was submitted for approval to the Buffalo State College, Institutional Review Board. The Institutional Review Board approved the project on March 16th. Once all these forms were approved, the researcher set out to schedule meetings with five of the Buffalo City Hall employees who agreed to participate in the research.

The first interview meetings were scheduled on March 21st. The researcher managed to meet with two directors/managers, and one office employee. Each interview meeting took on average of 45 minutes to one hour. The three interviews took place in the participants' offices and one at a workstation. All three interviews were scheduled throughout the day. In the invitation emails, the researcher highlighted the importance of having the interviews in a comfortable environment for participants. Therefore, all participants chose to have their prospective interviews in their own office or workstations. Before every interview the researcher explained the purpose of the interview, the interview process, and eventually asked participants for their consent for the interview and audio recording. All participants agreed and a consent form was signed by each participant before the interview process.

Audio recording was used to acquire data in order to avoid inaccurate accounts and misinterpretation of the interviews. Audio recording as a form to acquire data provides better accuracy for each individual meeting, their respected opinions and general responses (Bailey, 2008). The study sought out to make participants comfortable with the process. Therefore, the researcher provided a friendly atmosphere and attempted to normalize the process as much as possible in order to avoid bias and obtain genuine answers about the mechanism, systems and organization they work in.

When participants questioned the need of audio recording, the researcher assert the importance of the potential of misinterpreting the data, due to the insufficient time to write down

responses and continue the flow of the interview (Bailey, 2008). The researcher also reaffirmed that if participants felt uncomfortable with any part of the study, they could stop their participation at any point. The researcher understood the potential limitations that could arise due to positive or negative bias-opinions on organizational activities, office environment and e-government systems in which the participants worked. In order to avoid this, the researcher asked questions from a script as guide and encouraged interviewees to provide information that could potentially answer the guided research questions. For instance, during the first few interviews one of the directors/managers frequently went off topic and began to mention personal achievements rather than departmental movements. The researcher asked the same question twice, and remind the participants about the study at hand. The researcher tried not to deviate away from the guided research questions. By mentioning the importance of the précised answer the question at hand prior to the beginning of the interviews with the three other participants, another being a Manager from a different department and two others being office workers.

The manager from a division of citizens services department initially had trouble scheduling to meet and the meeting time was rescheduled twice before and interview could be done. The researcher was able to schedule a meeting on March 22nd. During that meeting, the manager expressed his interest in my project and was eager to be interviewed and asked questions about the field he worked in. The fifth interview took place on March 29th. On that day, I met up with the office employee, the participant had the request of doing the interview somewhere away from their current workstation, and proceeded to enter his/hers managers office where the interview could be done in private.

The questionnaire was composed of 21 questions with 13 sub-questions which totaled to 34 interview questions. The questions were adapted from an article by Podder (2013) for a study set to evaluate local e-government in the country of New Zealand. These questions were set to provide an understanding and evaluation on important variables within the sphere of e-government. The questions were specifically focused on data information, network infrastructure, broadband availability, information security, legal/regulatory frameworks, department size, management and political support, citizen participation, department culture, financial resources, technical expertise, skill/training, and collaboration (Podder, 2013). These questions were modified by the researcher to appropriately fit with this conducted in the City of Buffalo. For a full list of these questions please see Appendix A.

In order to analyze the data gathered by participants' interview, a framework analysis was used (Ritchie & Spencer, 2002). This analysis allowed the researcher to create a thematic framework that was composed of key issues and concepts that could be moved around and arranged appropriately (Ritchie & Spencer, 2002). In addition, a content analysis was conducted on the City of Buffalo website, the Open Data website, the Buffalo Roam application and the 311 citizens services application on April 2018. This was done to verify whether the statements made by participants in the interviews coincided with the information available online. These sites were chosen to cross-reference because they are the only online databases currently offered by the City of Buffalo. A content analysis served well as a key approach towards identifying if interview answers were a reliable source (Elo & Kyngäs, 2008; White & Marsh, 2006) Following the interviews and the online analysis, data was rearranged in a thematic framework based on the four functions of e-government. As one can see throughout the analysis, the

question was introduced with the participants responses followed by the data provided from the City government websites and apps (Fereday & Muir-Cochrane, 2006).

Chapter 4: Analysis

Questions were not given to participants prior to the interview dates. On March 21st three interviews were conducted in offices/workstations, two with directors/managers from various departments and one with an office employee. On March 22 one interview was conducted with an office employee and on March 29th the 5th and last interview was conducted with a director/manager. The questions and answers were categorized within the four functions of e-government. This allowed for a better understanding of where the City of Buffalo stands in the e-government sphere. The structure of the analysis presented the questions, then the answers from the three directors/managers (D1, D2, D3), followed by the answers from the two office employees (O1, O2). Supporting information from the City of Buffalo main website (W1), the Buffalo Open Data Portal website (W2), the 311 Citizen Services Application (W3) and the Buffalo Roam Parking Application (W4) were listed below this. These online databases/applications are all run by the departments selected for inclusion in this study. The first set of questions aimed to evaluate e-organization within local government.

The first question for the subset of e-organization asked if e-government implementation in their department was affected by issues relating to data or information availability, appropriateness or quality (Podder, 2013). The following text provides answers given by three of the directors/managers.

D1: "Yes, we're constantly working with data. Identifying datasets within departments, also checking the quality of it, and making sure that there's no protected or sensitive personal information that we're releasing."

D2: "Yes, definitely, a lot of the stuff (calls, or need for assistance) we get here aren't always service request, just people looking for information. And the more information we can pump out to people, you know, the better it is, the less people have to call and find out. You know, call to try to find out why people don't know. A lot of people do know to call [redacted] for certain information, some people don't. For those that don't we would try to make that information available online where people can just almost like Google but City

of Buffalo Google type of thing, “knowledgebase” what we're looking to implement that will definitely assist with all those.”

D3: “I think all of those are affective not in a adverse way but also in a positive way. the more data that we have and you know data can help make, I'm a big believer that data equates to making better decisions, we should be able to make an investment in that, make sure that departments have that and was looking at that, you know, because when we using data to help make decisions it's better we don't have to go on something subjective, but anecdotal. We're looking at information I don't have to feel like I'm profiling because I'm looking at the data! I think data and looking at information in government also can help with inclusion and issues of equality where I can look to see how some people are participating and some people are not” (See Appendix B for remainder of response).

It appears that D2 and D3 agreed with D1, in that appropriateness and quality is a big part of their job. They strive to protect the information of citizens requesting services as well as making that information available to the public and their respective departments. D3 also appears to be interested in the positivity of data in terms of providing efforts where participation seems to be missing from citizens. The responses provided by O1 and O2 did not provide sufficient information to answer the question above (see Appendix B for more details).

The Open Data website (W2) displays its citizens data and information under CitiStats on April 1st (CitiStats, 2018). Cases are given a number and are shown as either closed or opened requests. The datasets are displayed by date of request, subject of request, location, and department involved. These datasets provide a sense of transparency without compromising citizens personal information (Data, 2018). Citizen data and information is collected by the city in order to provide certain services. Some interviewees responded to the question above in terms of citizen privacy and protection. The above was listed in order to portray how data is coded to protect citizen privacy.

The second question for e-organization addressed if interviewees felt their departments network infrastructure, speed and reliability is sufficient to support current and future e-government needs (Podder, 2013).

D1: from my perspective, yes, we partnered with **Socrata** to host our open data portal, and they are a leader in the open data field, with well-developed software and that is reliable and excellent.

D2: 90% I would say, we've had a couple issues with MIS (Management Information System). I don't know if you have been able to talk with them. But we have had a couple little slip-ups but nothing majors to compromise our department and services we provide. For instance, we had the our phones lines go down a couple of times but it was short-lived, where, you know, people may be looking for something online, can't find then call us, but it was went down. Out once in a blue moon our software program, which is what we drive on, have had issues in which is also a way people can report via the mobile app and online so but it's been pretty good.

D3: I believe so, and I believe we made significant investment, you know, what I need with my department as we talk about what we want to be able to do it so we thought part of this is making a significant investment into the infrastructure... we have to be able to be scaled up and down, you know whether it is a snow emergency or weather would have taken one simple call we have to be able to handle that.

The three directors/managers appeared to respond positively to the question. D3 discussed how they are aware of what they need in their department and how the network has been reliable in all these circumstances. D3 also mentions how they are aware of when their department needs to be “scaled up and down,” referring to the demand in the future and during certain crisis events.

Although the answers were positive for D1-D3, the office employees had different opinions on how much support their departments offer on speed, network infrastructure, and its reliability.

O1: “No, it needs a severe overall I think, I feel that our computers are archaic at best, as in it sometimes almost crashes while I'm trying to do basic functions of my job which isn't good. I think that we are on the road to improving it, it's just it's very slow, and it shows the disadvantage in working in government it takes longer to adapt it just the way

it is. It's not as if you were in the private sector as a company that's investing you would just go, when I was in the private sector I would go and say, this isn't working, this computer isn't working and it would be fixed or a new one, or, hey this computer is not handling basic **social media** needs so I need a new one. It wouldn't be, it would be 24 hours, and I would have a new one. It's very like make do with what you have. I have to do 90% of my work on my phone. Because this is the newest phone out there. That is definitely a disadvantage, were able to do it, it's just I feel like it would be better if we had better stuff. But I'm sure everybody feels that way."

O2: The short answer is "NO" but I think that we certainly recognize that and we're working towards getting all the infrastructure up to speed to handle a lot of the different technological developments.

These responses show the lack of communication between directors/managers and office employees. Exploring the City of Buffalo Websites W1 and W2, no information is available to describe infrastructure issues amongst departments at City Hall.

The next question continued to address the topic of e-organization, specifically, the availability of broadband within their departments as being an issue in e-government implementation (Podder, 2013).

D1: "No, we have reliable internet access and I haven't had any complaints about it."

D2: The internet is pretty reliable, every now and then we'll get like 15 to 20 minutes. Where software may be running a little bit slow, I think that's when they running crazy reports upstairs in MIS, something like that but we really have no issue. There has been times where we have lost the software for a couple of few hours. We would post up a message on the homepage "please call 311 we are having server errors" and then we would manually write down information. Once the software is back up we would have to input all written material into the software database. Which at times it is a very time consuming issue that needs to be done.

D3: "No, not with us."

The directors/managers agreed that there are minimal issues with broadband reliability. D2 reported that the server will occasionally fail but, in these times, they will refer citizens to another avenue of e-government and then process all claims manually once the server returns.

The response from one of the office workers contradicted directors'/managers' statements. But O2 agreed with the Directors/managers, stating the following "O2: I would say no, because broadband is widely available." O1 stated the following:

O1: "Well, while we have the internet we don't have Wi-Fi, in the office of **communications** if you're supposed to have Wi-Fi in any part of this building it should be here. Because I do 90% of my work on my phone, it's just draining battery power constantly because here I am doing work. I mean this is my mobile desktop I take this with me when I'm with **the mayor** and I'm **posting** with it and I'm doing things in real time, citizens expect that and they should expect that. So it's just, it definitely, like, is weird to come in here and still be doing stuff on this because my computer is on its 250th update from 1812."

According to O1, the broadband availability in his/her department was virtually non-existent, however, in W1, under news and announcements, the office of the Mayor of Buffalo reports an expected expansion of JeffFree WiFi network which provides free wifi in the east side of Buffalo ("City of Buffalo," n.d.). This demonstrates that the city is striving to improve and expand the availability of broadband access for all citizens. The online resources do not specifically express any issues or new improvements of the inner workings of broadband availability in City Hall.

The next question on e-organization inquired to what extent information security is an issue in e-government implementation in their departments (Podder, 2013). The following answers describe how important information security is in their departments, however, interviewees neglected to discuss whether it is an issue within their departments.

D1: "It's a big issue there's a lot of data that the city collects, which is people's sensitive personal information. Personally identifiable information like Social Security numbers and things like that and we wouldn't want to put any of our constituents in danger or make them less secure because of the work that we're doing. So we're very cognizant of making sure that the data that we're putting out is clean quality, data that is expressed in to account privacy concerns of our residents."

D2: “Security is pretty important we get a lot of F.O.I.L requests for many different things. To protect our citizens we like to give them a choice to be anonymous. A lot of our request are sensitive whether it be police-related or complaints about neighbors.”

D3: “I think it's very important given folks privacy and anonymity, due to many folks not wanting to share their information when making complaints of issues happening in their community. It give a sense of transparency of how security works. Which gives citizens a peace of mind, because we aren't selling or using their private information with malicious intent.”

Office workers (O1 and O2) were unable to provide much information on this topic; therefore their answers were not included. Please see Appendix B for more information. W2, on the other hand, did provide information on how the city collects personal information. For instance, in the privacy policy section, data is said to be collected through cookies or voluntary filing of information when requesting services, and is kept secure (Data, 2018).

In relation to security of data and information, a follow up question addressed if their departments have a privacy policy that covers electronic information about citizens (Podder, 2013). The responses from all five participants was overwhelmingly positive.

D1: “I think that's ingrained in our open data policy. We speak to it (located on the website of the open data policy homepage) we define what is protected information we, define what is sensitive information and then we say that we're going to make information available but we redact anything that is protected or sensitive information.”

D2: “We deduct all personal information regarding personal information to never give that out in any kind of way that is our policy. At times we share it internally with other departments need be. But we don't not give that information out. For example: permits and inspections cases that used to go to them the way we used to have it is when we sending a request to somebody contact information of the collar is on there cases where inspector and your neighbor is complaining about you, which created major issue so we'd like for their process for housing we've taken off the contact information.” I just buy for whatever reason the only time we share the information with inspections now is if it's an interior inspection because they have to make contact with that person to get in the home usually the renter because something is going on inside the property.”

D3: Yes we do, because we take in information so all of our workers or I'll call-takers are about some confidentiality in terms of what they share and how they share it and it's important thing.

D3 is referring to the type of protocols his/her office workers have in regard to storing and distributing confidential data. The O1 interviewee mentioned how his/her department deals with different privacy policies due to their outreach focusing specifically on social media networks, such as twitter, Facebook and Instagram. They mentioned the following:

O1: "We don't really, I don't feel like we are really collecting any information. I mean other than like our facebook and their terms of agreement that we use with Facebook. We're not taking any information. We're not holding it anywhere, and we're not doing anything with it, due to it being in the public domain."

The O2 interviewee decided to focus his/her response on the on-boarding process and training that is received by new hires in terms of privacy policies. His/her response can be seen below:

O2: "Yes, we do have a privacy policy that everybody reviews in their employee handbook when they first get started working here. Also we review different components of the privacy policy in our monthly meeting, things change so rapidly and a lot of us are part of digital networks outside of work in the city government so but with that said we'll always representing our jobs as city government workers."

W1, W2, W3 and W4 all have extensive privacy policies displayed on their homepages. These privacy policies, in general, describe the use of personal information and how it is stored and protected, with no intent of sharing or selling it to any third party vendors.

The next question aimed to address if an adequate legal and regulatory framework is in place to facilitate e-government implementation in their departments (Podder, 2013). For this question, it appeared there were only two participants that understood that their regulatory framework is overseen by the Law department at City hall, and other participants did not know such department existed. The responses are as follows:

D1: "For my department, I've worked with legal staff to come up with the open data policy. We have discussed each dataset, and we make sure that there is no legal concerns. Especially sensitive data sets, that may have some concerns, we run past the Law Department. Also, in our initial load datasets, I ran everything pass our Law department, So we have a pretty strong legal framework in place."

D2: "Not that I'm aware of."

D3: "Yes, we have great lawmakers and corporate counsel at the law department that work with us, in order to implement new projects. Its within the framework that we have which its prescribe to create. I think we have what we do, the climate here in Buffalo is pretty great, what we have, what lawmakers and our Corporation counsel at Law Department."

O1: "I don't know. I think one of the reasons why we should probably finish writing up are like social media policy because we don't really have one in place because it's so new, so it's basically in the works." I don't know. I think one of the reasons why we should probably finish writing up are like social media policy because we don't really have one in place because it's so new, so it's basically in the works."

O2: "Certainly Yes, that's one of the challenges of just being able to go out and implement whatever the e-government strategy that we want to. Everything has to run through the Law Department for obvious reasons so they are able to troubleshoot and red flagged a lot of our processes before they implemented."

According to W1, the Law department is the overseer of all major departments in City Hall. W1 also states that the law department serves as corporate council for city agencies conducting business with private entities (Department, 2018). The survey continued to ask if there are any specific legal or regulatory issues that hinder e-government implementation (Podder, 2013). All five participants agreed with the fact that the current regulatory framework within the Law department did not hinder the flow of implementation.

D1: "I wouldn't say it's hindered anything I would say. it's made the process a little bit longer but everything in the process is there for a reason so No. and personally I am okay with such structure. Our implementation phase was pretty quick comparatively speaking to other large-scale IT projects."

D2: "No, not that I'm aware of."

D3: " I can't think of anything right now that would hinder you know I mean. Our job is to listen to hear what folks have to say and in the various channels and I think listening and hearing ebbs and flows. What people say is can be cyclical at times but our job is to listen."

O1: "Not really, I mean, I know that there are copyright issues that you have to pay attention to, obviously, we can't be like, we'll just take this picture and use it as ours. Those are just regular things that everybody would have to be careful of, whether its government or not you have to obey the laws and rules that regulate the internet."

O2: “Not really much I can think of, I think just the speed at which it comes to fruition so, for a while we are waiting for legislation about e-signatures to come down from the state. Again, some of our forms, we wanted to digitize them but, some of them required signatures from the state. We're waiting for that legislation to come, to come down, and say that e-signatures are just as good as regular signatures.”

W1, W2, W3 and W4 did not specify the time it takes to close a service request. There was not a specific dataset to identify the length a service is open and if the law department has hindered such services.

Next, this researcher asked to what extent interviewee's department size had influenced its adoption and implementation of e-government (Podder, 2013). All participants generally agreed that they have a current sustainable size within their departments, however some of them did stress that having more hands in a project would greatly benefit the speed of e-government implementation. Those working with certain departments also discussed how their field is not 'prioritized' and expresses their opinion as the department being undervalued.

D1: “If there were more of me, we'd be further ahead than where we are now. That means more datasets to be input and released, improvements on visualization of information. Also, more interaction with citizens, with that being said we're doing a lot with a little.”

D2: “There was a perceived need of City services being requested from citizens, the high demand in calls and flow of internet activity has allowed us to request more funds into our department and expand our team in order to handle such demand from citizens.”

D3: “I think we have a good size at the moment but with the ability to scale up, if we need to and grow, you know, we designed a system that way, you know, but I think right now we're pretty responsive too, we look at our metrics and I will respond to the folks and we try to keep that.”

O1: “I mean we don't really have a big department so it really is small, like, it's just, I feel like the more people in government understand what social media is and what the power is that it has in the effect that it has in the fact that it is not an afterthought, it should be the first thing you think of, because that is the first thing people are looking at to know what's going on. so I feel like in a way it's almost down played, to some degree but it should be a little bit more prioritized.”

O2: “I think the size of the department is only contributing to the implementation of e-government, there are so many moving pieces within different departments and each internal department. A lot of it comes through the **Communications Department** one way or another. So, I think having the amount of eyes, ears and hands, that we do have that makes delegation a lot easier.

When reviewing W1, W2, W3, and W4, it appears they do not mention anything on department size. The departments the interviewees represent all differ in size.

The next set of questions, and subquestions, addressed topics of management support, good leadership and political support within their departments. The primary question asked to what extent is there top management support for e-government in your department (Podder, 2013). Four out of five respondents expressed that they had “high” top management support in their department. One respondent (O1), being an office worker, said the support was “minimal support,” and did not wish to comment any further on the question. W1 shows that the Mayor of Buffalo continues to push for new city projects that involve improving e-government all over the city. For example, the city has launched the “Civic Innovation Challenge” (Buffalo, 2018). That is set to use the Open Data Portal (W2) to create or improve e-government solutions for issues that exists in the City of Buffalo. The next question asked to what extent does your top management communicate the importance and benefits of e-government (Podder, 2013).

D1:” I think the mayor spoke on this in the State of the City address about the need for open data and all the benefits it will have for the city. I think he gets it, the importance of enhancing it’s applications and developing e-government services. I think we’re heading in that direction we’re becoming more increasingly digital world and the city needs.”

D2: “High”

D3: “So I have weekly staff meetings and its also written as you walk through you saw our mission statement. It’s written on the wall. That we have core values, you know, that are written on the wall. You know i’m always stressing too, when you are in the people business in listening and hearing and understanding. And also tracking, you have to make sure that the level of standards in terms of facts with me. And we make sure that folks understand that.”

O1: "Our mayor is very hands on, a lot of people a lot of elected officials are not. The mayor is very involved in every single thing that goes out. Nothing would ever go out without his support, he kind of almost prides himself on being more Hands-On about it. At the end of the day, it's his voice and I think that's a smart, I think that any elected officials should feel that way because it should be an extension of you. So when we're posting things, it's not phony, it's actually him, he does change things and writes things. It is definitely kind of cool to work for someone in government who wants that active of a roll and, honestly, the other upper levels of management do also weigh in and stuff. So it is it is very well done in my opinion."

O2: "Like I said before, just going on the same page, and to have everyone with similar goals that helps in any type of implementation, especially talking about digital half components, because it is important so I'll be able to meet people in the middle where they are, if it's training or if it's any type of extra educational piece."

There were no indicators on the City of buffalo Websites/online platforms to address the type of communications top management has with their staff.

The following question asked to what extent good leadership influences e-government implementation in each individual department (Podder, 2013).

D1: "The Open Data program would not exist without strong leadership."

D2: "It is extremely important to have a champion within the office to push for new project and influence others through strong leadership to set a standard in the office. Stuff like that, and showing the need seeing the need and demonstrating the need to others why we need to push this out you got to get acceptance roll this out, you know without a champion to push that you're not going to get there."

D3: "I think this is very important, I think you have to have them because you know my boss who's the mayor of the City of Buffalo looks at this as a priority and I see how because he does that it allows us to be incorporated within the fabric of government. So this department touches all the Departments where we feel that our operators, our call takers, know more about what's going on in this city than any other, probably other staff person, because we have to, we can't tell citizens we don't know what is going on."

O1: "The more with the times the leadership is, the better e-government becomes. Because it's involving e, the "E" in e-government is what makes it so tough to keep up with, because technology moves faster than anything around. So any lawmaker or anybody involved in government can't afford to not understand it anymore. It shouldn't be like, oh maybe i'll post on social media once a week, No if your in government you should be plugged in every day. Because that's the best insight that you're going to have to the people and also the best access I feel."

O2: No answer.

The websites and applications do not specify any individual departments leadership strategies. Leadership appears to be extremely important to each individual department representative. Above, each interviewee described how their e-government implementation would stagnate without the presence of some sort of leader to advocate for services and movement.

The following question asked to what extent is there is political support (Mayor and Councilmen) for e-government in your department (Podder, 2013).

D1: "The Mayor is obviously extremely supportive of the open data program, our procurement of **Socrata** past in the common Council unanimously. So they feel the need for it, which gives me a sense of full political support for the work that I am trying to get accomplished. So I feel like I have pretty strong political support for the work that I'm doing."

D2: "Very High."

D3: "High support, I'm allowed to look at new ideas and perspectives of things that are coming in, I think there's tremendous support, its gotten us this far, I'm allowed to look at new ideas and prospective things coming in. I think that's an important thing. If you walked in any other department it doesn't look like this department. No other department looks like this one."

O1: "The mayor's is behind it 100%. City council or common Council they have their own so obviously it's a priority to them. As of how much of it is, you would have to speak with them because we do not work together. I do not handle theirs they don't touch the mayor's we are separate departments ours is much better."

O2: "So I think that's one of the strong suits of this city government. In particular their is tremendous support for the mayor in the councilman. it's something that is prioritized pretty high and their goals of trying to keep up with technologies in the private sector." so I think that's one of the strong suits of this city government. In particular, there is tremendous support from the mayor in the councilman. It's something that is prioritized pretty high and trying to keep up with what's going on out there in the private sector, in the world how citizens communicate with each other and communicate with their government."

In W1, under the City of Buffalo comprehensive plan, section 1.6.13 telecommunications (Plan, n.d.), the major plan is on becoming the fifth best-equipped region in the world, by laying out over 80,000 miles of fiber optic cables that would tremendously increase high speed internet and connectivity between regions, and globally. Which would set up the City of Buffalo to be one of the top cities in Western New York. This comprehensive plan has been proposed by Mayor Byron Brown's administration with the support of all councilmen in the City of Buffalo. This plan shows that the city's political structure is willing to make large investments within e-government.

A follow up question asked what effects political support (or its lack) have for e-government implementation in your organization (Podder, 2013).

D1: "If I didn't have it, I wouldn't"

D2: "Very strong we wouldn't be in a place we are right now without the support that we've received mainly from the mayor but also many council members as well."

D3: "I don't know I haven't experience the lack of support yet. I think it's been a pretty supportive environment and I think there are many things that I've been able to bring to the mayor, common Council. I think we wouldn't have a 311, we wouldn't have an Open Data portal, we wouldn't have a Civic Innovation Challenge, if there wasn't any support and those are all forms of using data through our e-government systems."

O1: Did not provide sufficient response, see Appendix B for details.

O2: "I think it's really important to have that support because, like I said, there's somewhat of an education piece to all of it too, and that takes time and resources. So, if we're not allowed the time and resources to not only implement whatever digital strategy it is, well first we got to come up with the idea and procure a digital strategy and implementation process, and then the education process, so it's kind of a long road and getting all the way to the end because it's not just a one day. That support is monumental in getting anything done.

Political supports were not specified on the websites or applications due to potential violations of Hatch Act. However, this topic is extremely important. In order for a department to gain more funds, or get approval on major e-government projects, they need bipartisan approval

from elected officials at City Hall. Departments need certain resources in order to carry out their jobs. To gain said resources, departments must be implementing or creating projects that benefit the constituents of councilmen or mayors.

The following questions addressed the function of e-democracy and how it works within each interviewees department. The first question asked if their departments have a formal e-government strategy (Podder, 2013). Four out of five participants responded that their department did not have a formal, current e-government strategy. One director/managers responded that they did have an e-government strategy within their department but appeared to be discussing informal data collected rather than an actual strategy.

D1: "As of now, yes being the Open Data program most of our presence and interaction with the community is in a digital format, so most of our communications with constituents is through online formats."

D2: "Not a strategy at this point in time, no. I know you're going to meet with another director as well, he may be able to give you some more information on that than what I'm able to give you."

D3: "I would say I don't think it's formal, I think it's something that when I meet with my department heads and we talk strategically once a year, we set up goals. So, I asked department heads if they have specific goals, we talked about it and every year we look at whether we've accomplished that or not. So, in terms of overall big picture strategy, nothing written down formula, but I tend to think that I would like to try to have a road map."

O1: "No, not really, we started to create one based on one that I have, I had from friends working in the digital team for the governor's office. But we had to put it on the back burner because there isn't enough time to do. It is it written down? NO, but do we have like an aggressive strategy or some kind YES."

O2: "I think that we are certainly putting an e-government strategy in place. One of the newer components that we have, especially with our new website, is the Notify-me portal, which allows citizens to sign up and subscribe to different notifications that would come from the different departments within the city. It actually would send them an email or a text message when any new information or updated information is communicated out. For example, if someone was interested in the recycling program for whatever reason, they could subscribe to that department and anytime that the recycling program had a new event for the press release or did anything new, they would be sent a message

through SMS or e-mail. I think little small things like that certainly heads into the direction of fully versed e-government strategy, I think we're getting there.”

After searching through the interviewee’s department websites, on W1 there appeared to be no indicator of current e-government strategies listed. What was primarily listed in W1 were missions and goals of providing general government services. Information was not found on W2, W3 or W4 regarding this topic.

The follow up question addressed if there current strategies align with Erie County or New York State’s e- government strategy (Podder, 2013).

D1: “The cities new Open Data portal is federated with the State of New York’s portal. It means that all N.Y State data is discoverable on our open data portal. So we procured the same vendor who hosts both the State portal and the City of Buffalo portal. So our strategies with the state are pretty similar in that regard.

D2: No response.

D3: “I don't know, sometimes government, smaller municipalities within a bigger government unfortunately, we sometimes move in a vacuum. I know in terms of the City of Buffalo and responsibilities that we have in terms of across [REDACTED] or what we do with the [REDACTED], I try to base those priorities, based upon what the Mayor is trying to accomplish. When he did the State of the City. I try to base those goals or that we want to achieve, to be based upon how citizens interact with us on, through their interaction or to focus groups when we go on the community. Not that we don't try to relate with what goes on in the state, but if there's rules and regulations or laws that we need to do we comply with that but, overall, in terms of am I following with what the state is doing? Probably not. Am I breaking any new barriers in e-government? I say no.”

O1: “I don't, I wouldn't quite say the word align is really the word for it. It’s more of like, partnership, in fact, I was just speaking with one of the staff members of Senator [REDACTED]. For example: All these lawmakers continuously pat each other on the back, rightfully so, because in Western New York, government does work together a lot, and a lot of really big things have been happening. So that partnership has not really translated well on social media, and so I'm working consciously to change that. I was actually just speaking with some of them if they see us put something up or if you don't see it, because, as you know, an algorithm controls Facebook. We have said here are some times and dates to check when we post something you might wanna share it, and just say ‘proud of the work you do.’ That partnership shouldn't just be at a press conference because most normal people don't go to press conferences. They don't understand how we received messages in the Facebook for the Mayor to do everything.

All levels of government, I think people don't have a basic understanding on how the different layers of government work. They feel like by sort of expressing it a little bit more on social media, it actually will educate people but also understand better how partnerships and governments work together.”

O2: I think that with the development of it, and the more we are able to put the strategy into place and start using some of the components the more opportunities there are to merge to different strategies and kinda streamline everything into one, because as you know, when things are digital it's easier to keep track off and it's easier to merge into different processes. So I'm not sure where the state and the county are as far as where they are with the development of their strategies, but as I said as the city of buffalo gets more and more versed in their strategies it will be easier to kinda collaborate.

There does not seem to be data available to suggest a connection between e-government strategies of Erie County and NY State. Having a well-developed strategy for e-government is crucial for departments, in order to address short and long term of goals for their e-government implementation. Unfortunately, only one department provided an explanation of how their works is in partnership with the state of New York and Erie County. That department ensured that all proposed projects are being shared in a collaborative effort with the State and County.

The following question asked to what extent and how citizens' needs and perspectives are taken into account in this strategy (Podder, 2013).

D1: “So there's a couple ways that the community can interact with the open data program, one of those ways is through our suggestion, a dataset functionality. When the community wants data they can either FOIL information (freedom of information law) or now they can go to the Open Data Portal and see our daily activity. If they don't see a dataset they're looking for, they can always comment and suggest a dataset through the portal which lets us know that the community is interested in that data, and we can start the process of properly releasing it to the public.”

D2: no answer

D3: “So we do have online services, we have a menu of many different things will, whether by, you know, putting a complaint on an issue in regarding the service request, whether it's paying, making payments, not just for parking tickets but paying taxes or bills. Whether it's grabbing information you know what department regarding the event or putting out events that are happening within the city. I'm a big proponent of e-democracy and how we are able to listen and how to be. Quite honest, every time that somebody makes a call or put some issue and has a form of listening to somebody, how

people vote, I think people let us know what's going on by issues that affect the community. I'm really big with equity, you know, and how some communities will access e-government and then some don't and then where I know where some areas, there are pocket where I know they should. So how do we get to those people to participate so we've used it many different ways. The Mayor has about a year-and-a-half ago, two years ago, we had we just changed all our codes we call it the green code. Where we've updated different codes and regulations and terms on developer as way to build and it hadn't been updated and over about 60 years. We used the power of putting information out and listing to the people and understanding that we have an Open Data portal, and we've open up different datasets. We develop an open data policy. We put that out to listening to hear people's concerns and not even that for them not only write to us about what they felt about it, and we use a tool or app called the "Madison project" and so we were able to put something online and people were able to comment and get citizen feedback, not this one the whole thing but how "I don't like" this "I'm lying here I don't like this paragraph" and that was when getting this type of feedback, it can be challenging because sometimes government is insular however, the good thing about these challenges is that at the end of the day citizens have an input. My goal is to be as transparent as possible and being able to encourage e-democracy, and providing more channels of communication for citizens to voice out their opinion and be informed of what is going within City Hall."

O1: "When it comes to social media they have everything to do with it, I mean because at the end of the day, it isn't about who's page it is, it's about who they serve because it's about what their job is. So in the context of the mayor's office, everything we do consciously tries to show the footprint of the community in not only the initiative that's happening or what the reason of the photo is but, it also takes an account to show that this community isn't just a bunch of white people standing with shovels this shows every single. We try to show every facet of the people that are actually in that community to give everybody a true idea, nobody wants to see a staged photo. People living in the neighborhood need to be able to relate to it or why would they even care to get it noticed."

O2: "The needs of citizens is the main factor in a lot of the things that we do here. There's several mechanisms that we hear our citizens through. Our Facebook page is one of them and that has been a huge platform for us to be able to reach out to citizens and also have that two way communication. Also, we do things like our monthly newsletter, other forms of communication that we've put out and 311 self service helpline at citizens are able to call into and a lot of that is automated and the way that request come in and the way that we handle them are certainly centered around the citizen in their needs."

Much of the development of W2, W3, and W4 were set to serve citizens and their needs for government services. These particular sites helped citizens pay bills, contact officials, make complaints, obtain general forms for programs, and a form of communication through suggestion sections that exist in W2 and W3. Four out of Five participants were able to provide information

on how citizens' perspectives influence their current strategies. From an e-government standpoint, citizens have the ability to use government websites and private social media accounts to provide feedback on the work these departments are doing. The interviewees described that their departments' decisions heavily relied on citizen input. In general all websites analyzed were focused on the needs of citizens.

The following question also addressed if the strategy incorporates e-democracy (on-line participation) as well as on-line services (Podder, 2013). The responses for this question were as follows:

D1: "They can interact with us, they can obviously go in and see everything that the city's doing through our data and it kind of increases transparency and increases more informed communication between the constituencies in the cities because we can start using data to have more informed discussions."

D2: no answer

D3: "We do have online services, when it comes to putting a complaint or addressing an issue with a services request, citizens also can make payments online, and making general information of events, or services out to citizens. We need to increase participation in term of government, weather it be e-government or hearing the seintements of residents that's an important way. We do that by people calling, we do that by having meetings, we should be doing that in a way, of kind of democratizing, people's choices, by going online, or hearing them in a different way. The more channels people have, channels meaning an online app, going on a computer, calling, all in more what channels that they have the better we are."

O1: "The online services aspect is kind of a slippery slope, like, there are people that you still don't seem to call 311, instead they will message the Mayor. So I will, in turn, end up having to message 311 to help them so it does work in that aspect, however, we obviously prefer 311 because the service works. I'm able to help get them in touch with something, however it's faster for them to go that route then just asking the Mayor, you know, but you, in a way, through social media, I mean there are people that never know what services are available until we say something about it on social media. Which is why it is important we have press announcements for everything, because then people are like 'oh I didn't know I can pay my parking ticket without ever having to go there' or 'I can do this and this and this' you know or pay my parking right on my app. While it doesn't necessarily work as a service it's still functions as one in a way."

O2: No answer

According to information on W1, W2, W3, and W4, the strategies of making services available online are crucial. Citizens can obtain information on all sorts of platforms widely available in the City of Buffalo. For example, requests for neighborhood issues/complaints can be made on W2 and W3. Payments for parking tickets and taxes can be made on W1 and W4. In order for citizens to directly connect with their elected official, or their respective departments, they could access and obtain that information on W1 and W2. The participants described how they encourage online participation. This participation allowed them to know what programs are working. Some interviewees have observed that many citizens call the wrong departments to request services and they try their best to direct them to the right department. Their goal is to be able to listen to all citizen complaints and request from multiple outlets of communication, not letting one voice go unheard.

The next question asked who or what unit within a department is responsible for e-government implementation and strategy (Podder, 2013)

D1: I am solely responsible for the implementation of e-government in my department.

D2: That would be my director, I oversee programs that are currently running through our department.

D3: I am, as the department head, you spoke earlier with **Bob Coote** who runs the **311**. I have multiple units of departments I run within this department, at the end of the day, being department head, that's my ultimate responsibility to listen to my department heads and my unit heads and kind of develop strategy and move forward from there.

O1: “ is a different component of that: in generally is in charge of the content, however the execution falls on very different things. I strictly execute all social medias stuff. However, I don't do a lot of the live video, others do that. I focus on that we use for that and for other things such as marketing or whatever I try to . deals with the website and digital on that end. However, we all rely on M.I.S if our computers don't work so it isn't just one person is part of the E-strategy I mean since we're talking about Electronics we also can't say that MIS I don't know what their role is in. I just know if my computer doesn't work, that's who I contact and with with the website he probably has to deal with far more because that is

ours. Do you know what I mean, like the website is ours so I don't really know how they work. How it is part of the strategy we are part of the [REDACTED] so we are the strategy.”

O2: “That would be me, my title is [REDACTED] but I also work a lot with the graphic designer, of course, because as we begin to brand the city little bit differently, she's been a huge part of that and also our [REDACTED] officers who do a lot with the media and other social media aspects we can all work in together, to put our best digital footprint forward.”

On W1, data available highlighted information on city employees and their responsibilities/ how they were in charge of e-government implementation. Information could not be found on W2, W3 and W4 regarding this. It is crucial to understand what each interviewee's responsibility was in order to get an idea of their level of involvement with the creation of e-government projects and implementation. These responses highlighted the aspects of involvement the individuals had within the City of buffalo.

The following questions addressed department goals, and how these goals cause conflict with other departments. First, interviewees were asked about main goals of their departments in terms of e-government. Conflict was addressed in a follow up question.

D1: “So our main goal is to make the city's data electronically available in easily accessible machine-readable formats so that people in the community, researchers, application developers, and entrepreneurs can utilize the data we're providing. Then, enhance the use of that data more so then just sitting government to do alone. So, it's kind of like breaking down the silos, boundaries and limitations, a bit and sharing the data with communities and this is a new thing in Buffalo but cities and states and countries have been doing it for about 8 to 9 years now.”

D2: “E-government wise is just a way, for people to access city services using the internet, phone whatever other Technologies out there we have mobile app. It has been providing online services for people, where they can report 24/7 whatever the issues may be.”

D3: “One in the Division of Citizen Services, it's chief commodity are people. My job here is to my commodity, is to hear and listen to what people have to say and try to catalog those particular issues so that departments could respond to them in an efficient way. That is why it is very important for me to make sure that we prioritized customer service in many different ways, not just listened to them on the phone but also how we

can input the issues and how fast we can resolve them. That's why they have implemented a status bar when jobs are requested through the department.”

O1: “Getting the message out is our main role is making sure citizens know what's available to them and making sure that whatever the Mayor's implementing gets known, because what's the point of implementing anything if citizens don't know it's there to utilize. I think we do a really good job of making sure that they know that something's happening. If the Mayors doing anything, why not let the people know what you're doing anything, even if it's simple and human. Me, myself, I like the fact that we have a Mayor that is not only telling me what's happening in the government but also what's happening in his life. You know like where he will share little intimate tidbits here and there about like his wife and his son and things that, you know, holidays and whatnot so in a way it's definitely nice in that aspect of not just governing but also humanizing. Because government at the end of the day serves the people so it shouldn't be so cold and institutionalized it should be a person. In a way, it should feel, it should have a heartbeat.”

O2: “I would say the main goals and objectives of our department is to really provide that platform for a two-way communication so that citizens feel like they have a huge wall between the cities and people who work in government services. Making it easier for citizens to reach out, making it easier for us to hear them in and take that information and also be able to track some of that process and practices that we do. So we could kind of be continuously improving the things that we do.”

Department goals and objectives that relate to e-government were found under the “about” sections of W1 and W2. Above the interviewees described the importance of having avenues of two-way communication, stating that it could strengthen services provided by government agencies. Their responses demonstrated how having goals in separate departments could contribute to the continuous investment of e-government infrastructure.

The next question was a follow up to the prior, addressing if individual department goals conflict with other departments in City Hall.

D1: “I would say more so align than conflict with. I know that there's a lot of departments that receive a lot of FOIL requests and they're excited at the possibility that those FOIL request will now be reduced because they can direct people to the Open Data portal to get the information that they're looking for. So it kind of, we're looking at reducing man hours, reducing paper costs associated to it, or sometimes I think people put data on CDs if it's so large and just having it publicly available anyone can go access it at any time of the day 24/7. It completely changes the way we interact with the community in electronic format.

D2: No, I don't believe our department conflicts with other departments, if anything we sorta rely on other programs developed in other departments to help us deliver services to citizens.”

D3: “The Mayor views the city as a big Corporation, you know, if you had an issue with your phone your calling they give you a ticket number, you know, and you should have an expectation of a result, you should be able to do that with government. We understand that this is a big city and things are going to happen. You know, most people understand that it was going to happen. Most people want to have a line where they can talk to somebody and things to be fine. These systems did not exist before Mayor Brown. The Mayor of Buffalo specifically wanted the work they were doing, to be able to have and show it as quantified results. I want it to be, how to make sure that we are listening to people it will quantifying it we're letting people know about what we're doing.”

O1: “Not really, I mean City Hall functions for the people so everybody kind of works together to make things happen, I mean yes, in a way, there are certain things. We don't have Wi-Fi, which is crazy to me there parts of the city that have Wi-Fi, and the [REDACTED] department doesn't have Wi-Fi, so yes we do get in our own way sometimes.”

O2: “I say these current goals do align with other departments in city hall, a lot of the things we do is to not only make things easier for the citizens, but also make things easier for the city government workers so that allows for an environment conducive collaboration. Things are easier and streamline, digital in a lot of cases is the way to go.”

Currently, there is no data that indicates if department's goals and objectives conflict with one another. The “about” sections of each department in W1 and W2 did not verify the information obtained from participants. However, the information acquired is important to understand that departments are working consciously to not duplicate services or impede on one another's department goals. This helped departments tackle different aspects of e-government all at the same time.

The next question related to external pressures, for example, to what extent has pressure from external stakeholders (e.g. central government, other local authorities, citizens and business) influenced e-government implementation in the department (Podder, 2013).

D1: “In implementing the [REDACTED] program, I have interacted with community members who have been wanting [REDACTED] for a while in Buffalo and now that it's here

they're very excited and along the way they've helped us kind of craft our [REDACTED] policy. We put out our [REDACTED] policy draft in an online format for public comment. People could go in, comment and highlight certain pieces of text in, that helps strengthen our [REDACTED] policy and then I continue to interact with people. They have helped make our dataset stronger. The more we interact with people who have been working in the space the more effective and useful our [REDACTED] program is going to be."

D2: The pressure has come through many FOIL request, that come from citizens, lawyers, and, at times, police departments. Now, with the implementation of the new Open Data portal we are able to direct those individuals there to easily acquire the information they need.

D3: "Federal government you know, I'm a big believer that municipalities Mayors, Mayors make this world go the way it's supposed to because mayors deal with everything from potholes to insurance and health insurance too overtime to everything. Mayors do it all, sometimes the high level of government they see the big picture they don't know sometimes like the president may not know the cost of a loaf of bread. We need to know that, you know because they deal with it pictures stuff. But sometimes constraints from federal government have or the lack of resources that they once provided are not there. We can't tell people that we can't do this because at the end of the day people who live in these community, this urban community have an expectation that we should be doing that. Sometimes the constraints it the federal government taking resources away from us, by changing rules or putting ownerish regulation sometime we'll have that effect. Would have an effect of the municipality, in terms of some other municipalities we're fortune in the City of Buffalo that in this area we are probably the subject matter of experts in this area. We have a pretty robust call center we have a pretty robust way of how we look at data in fact if I wanted to I could probably contact other municipalities and take their calls because in order to have a call center, I don't have to be in the city or municipality. We have a system that so robust City of Buffalo I can probably take calls from any town of municipality in Western New York."

O1: "Citizens have the biggest influence for our e-strategy almost 100 percent, they are the taxpayers they are the ones who chose Mayor Brown's vision. So they believe in what he 'in theory' because he was re-elected they believe in his strategy towards making the City positively grow. So their feedback its part of the wheel it's part of what keeps a going. So if out of nowhere a million people were telling the Mayor's page like this is a terrible program it would not be ignored because that is a direct channel into his office. So it plays a major role and obviously we look at what the citizens are doing. As citizens ourselves but also everybody is kinda on social media so we're always like all that seems like a really cool thing we can do here."

O2: "The citizens are obviously living in a digital world and so they want to be able to interact with the their local government as such so it's important that we try to keep up with the times and we continue to innovate our processes so that you know the alignment with what's going on out there in the real world. digital definitely, I think the most

pressure comes from the citizens in a local government. Because we are trying to cater to their needs.”

Observing all the information and cases that are available under CitiStats (CitiStats, 2018) in W2, this researcher saw the daily activities of citizens requesting information and services. Almost all departments listed on W1 had information on how to contact them directly, or put a service request or complaints. W2 and W3 allowed citizens to directly communicate and provide feedback on projects the city is conducting. W2 provided all information regarding departments activities, citizens request and much more. As the interviewees mention above, the Mayor’s Facebook and twitter pages updated their followers on a daily basis with current events. These mechanisms show the high level of engagement citizens in the City of Buffalo have in all levels of Local government.

The following question concluded the topic of e-democracy and it focused on the perceived need for comparative advantage or desire for leadership in e-government and how this influenced e-government implementation in the department (Podder, 2013).

D1: “Yes, we formed an Open Data governance committee, which is composed of data Liaisons from the major City Department's like fire, police, Public Works, permits, Citizen Services, Community Services, etc. They see the need for a better digital presence and they've been willing to work with me to get services out of their departments and make it available online so it's easier to use for everyone.”

D2: “We mainly have focused on trying to provide our services 24/7, based on the data we have there has been a demand for our services after hours. We are trying to provide our services to everyone at any time. basically just managing and seeing what request are coming in, and what people are truly looking for. A different agencies may be looking for as far as getting that information out to make any more self-service of also they don't have to call during 8:30 to 4:30 Monday to Friday, everyone schedules not like that so it's just a matter of finding what the needs are really, of all the stakeholders Weather be the community. We get a lot of requests from other departments as well as. As far is where the hot spots are for different issues.”

D3: “I think data, i think listening to people, I think in e-government or how we do that it should encourage. you know I set the sails for other department heads, I definitely think it it's an added plus. you know and it should help policy and how we do that. We shouldn't

feel like we develop a policy in a vacuum. We should have a channel to open doors to listen to people to help us shape the policy that we do. Everything that we do i try to have a focus group of people, we run things by listen and hear, because it too easy for me to feel like I know what it is you know and you know week-to-week throw it out and we want to hear comments. If what we're doing is not inspiring other department heads or leaders or unit heads, to think different in to be inspired the think about different programming we're in the wrong business. So this Mayor encourages that you know he's not monolithic with his leadership, to listen. He tells this and i say this, the answers to how we solve today's issues within urban government does not lie in this building. It's in the community. In so incumbent upon us to find different ways to hear what the community saying. some will go out and go to community meetings some will create an app, some will create you know something online to hear what people have to say about e-government but that's an important thing.”

O1: “Everyone in our department has the ability of leading a project, in the recent years we have acquire more staff, which have taken on more tasks. That boost in our department allows us to deliver better cleaner message for people. to understand what we're doing, Another factor was adding more people to the mixes that encourage more creative ideas and initiatives that have benefited the community. yeah well our department is different in nature in the fact that they really didn't exist until a few only so many years ago, so and before I got here there it was very like everybody had it seems like that they were trying to do a lot with a short amount of people. Now that they sort of boost of the department where you able to do a lot more and deliver the message better cleaner clear for people to understand what we're doing, I think it's also adding more people to the mixes added more ideas to an encouragement of initiatives that have benefited the community.

O2: I don't feel much pleasure for the federal or state government but more so from the citizens, the citizens are living in a digital world so they want to be able to interact with local government. So it's important we keep up with the times and continue to innovate our processes that align with what's going on out there in the real world. The most pressure comes from the citizens as a local government trying to cater to their needs.”

E-democracy occurs when organizations put time and resources into listening to the opinions of their citizens. Above, interviewees described how, at times, new innovative leadership is needed within departments in order to create cooperative communication between city employees and citizens. This researcher observed how hard these departments were working in providing citizens the proper tools to voice out their opinions. Giving people a voice and listening to such voices not only showed flaws in the system, but it also improved it because it is a collaborative effort between the City of Buffalo and its community.

The following category is known as e-services. The questions below were set to evaluate how e-service was implemented, for instance, what projects were in the works and how they were developed over time in the City of Buffalo. The goal was to identify the benefits these services could bring to the community. For example, the first question asked to what extent citizens in your department able to participate in e-government (Podder, 2013).

D1: "There's been a handful of ways that citizens have able to interact with us. on the open data portal there's a suggested add functionality. They can contact the dataset owner and they can comment on each and every dataset. We've held open data open house, were we have invited the community members to come in and listen to speakers from regional and nationally known speakers about open data. Tomorrow we're launching our Civic Innovation Challenge, which challenges app developers, coders, computer science majors, and technology professionals to take our data and 'spin up' for a unique creative solution using our data and I'm were also planning a Citizens data Academy to teach active community members how to better use what we're putting out there on the open data portal."

D2: "Basically as we mentioned before, online going to 311 webpage, or the mobile app, those are basically they can do that, also parking to have ways to help citizens, their app is called Buffalo Roam. They have gotten good use out of that so ive heard, because people use it more and more."

D3: "I don't think there is issues, I think you know sometimes and some communities may not have access to the internet or to broadband I think the Mayor has gone and his looked at certain corridors to team up and kinda provide broadband access in certain communities, you don't want cost to be a determining factor. Specially with young people to have access to that. In certain underserved communities we been able to provide corridor where folks can have access to the internet."

O1: "100 percent, if they have internet access they can participate, if they have social media and if they don't they're Stone Age person. But if you have social media there is no better time to be involved in government especially at the local level. By having access to the internet, I don't remember this when I was younger whatsoever, even having a remote interest in government. Because you just felt so far removed from it. but now with social media you're not removed from it. You just stand as tall as they do that you have a voice every individual has a voice. So you have more influence now than you've ever had before because of it. Obviously there are downsides to it as well but you as a citizen this is an exciting time to be a citizen because you have been given a tool that you never had access before."

O2: "So feeling over the traditional social media platforms Facebook, Twitter being some of them that just kind of opened up a lines of communication from citizens directly

through the Mayor. But other way i would say be the Notify-me module on our website. That allows people to be notified about City events, causes and departments activity. So anything City wide, for anyone of our departments whenever there are updates or something new to announce, the people that are subscribe to that notify-me category are automatically notified of what's going on. So that helps with the engagements with citizens in different programs and different events.”

In W1, W2 and W3, citizens had the ability to contact city hall employees, and request specific services. Two participants mentioned how they relied on social media platforms to directly communicate with their constituency. The links to these specific platforms could be found in W1, under the department announcements sections. In W2, the Open Data portal did show a suggestion link that gave citizens the ability to request more information. These outlets are crucial for the enhancement of e-service tools that are needed for every day issues that occur around the City of Buffalo. Above, there are examples of the multiple streams of communication, either private or public web pages, that departments set up in order to give citizens the ability to use or request services through them.

The next question continued to ask if internet access, broadband access, income, education, age, or language, were issues in citizen e-government participation (Podder, 2013). Four out of five participants agreed that there were not any issues that should stop citizens from participating online (See Appendix B). However, one participants disagreed and mention this below.

O2: “I think that those are big issues because you know obviously if your internet access is limited then even with the notify-me modular that we just talked about. You know if you don't have a cell phone with a data plan or any access to Wi-Fi internet then there's no way for you to get notifications even if you do subscribe. I think that the more access you have, the more engaged you're able to be so I think again that's the importance of kinda leveling the playing field as far as access goes, to other digital interfaces so people are comfortable doing digital in a different way.”

W1, W2, W3, and W4 did not mention any remedies on how to access online sources if citizens did not have the proper equipment. However, citizens always had the option of

physically going to City Hall and obtaining information or requesting services. The importance of broadband services or access to internet has become a crucial aspect of people's lives. O2 described how it is imperative for citizens to have access regardless of their age, social or economic background. Citizens in underserved areas need to be able to communicate their needs through any medium available. The implementation of JEFFREE WI-FI should aid in this area.

The following question explored how departments functioned. Specifically, the question asked in what ways does your department's culture (e.g. attitudes to and experiences of innovation and change) hinder or help support for implementation of e-government (Podder, 2013).

D1: "I think, the culture I've set up surrounding the open data program has kind of helped Nudge the Departments, to think outside the box. To think what are we not doing, that other cities may be doing. How can we provide more value to the community than we are right now, and I think we're starting to see some shifts and culture around here and I'm excited about the years to come. I mean we are just at the start of year one of Open Data so I'm excited to see what years 2, 3, and 4 have and how excited people get about releasing the data and making more useful and accessible."

D2: "I think it helps because we have a very diverse group here in our office and I want to say younger, shall I say not saying they're all teenagers, more less a younger staff which you know is more tech-savvy knows the power and everything and getting that information out as far. I mean social media alone I mean can get a word out about something in an hour that you couldn't reach before in any kind of way you know. You want to be giving as much information out but you also want to be mindful of what your giving out, what's going to come back on it, and the liabilities you got to deal with."

D3: "I don't think it's hindered I think it has helped us we have to be able to think outside the box and look Beyond where you going and what you doing. I think those are important things that you have to have a culture that allows you to do that I think it does. last year I wouldn't have been one of the top [REDACTED] within the city I mean within the United States. This wouldn't have happened if that climate didn't exist then named by [REDACTED]."

O1: "I'm lucky that I work for a mayor that embraces a strong diverse culture. Members within my own department don't embrace it, as much as they should. it's one of those things that you're going to fall behind, if you don't accept it quickly. because you're going to be talking about news that was already 20 minutes old. It is one of those things that you're going to fall behind. so it is one of those things in in the office or in any

██████████ job if you are not on social media. You need to find something else to do.”

O2: “I think both, I think the culture. well in in city government the culture is quite frankly is very bureaucratic, Their a lot of checks and balances and approval processes, a lot of people that have to sign off on the different components that are being implemented. so sometimes that slows down the process. But also it helps to develop an e-government strategy because there are so many inputs from different departments. Not only different departments but even different levels of this department. We get input from everybody so that helps to shape but more well-rounded program whatever you're doing. so on one end it may hinder because of the amount of time it takes to another and it really allows us to shape of more inclusive program.”

In order to properly take on large-scale projects, an organization or department must have a solidified culture that all employees are comfortable with. The interviewees described the importance of having all employees on board with their internal departmental cultures, but also understanding the general culture at City Hall. The interviewees all seemed to mention that there were high expectations for them as public employees when it came to serving the community they were hired to help. After an analysis of the online platforms, no specified information in W1, W2, W3, and W4 on department specific organizational culture could be found.

The following question served as a follow up to the prior question and asked to what extent resistance to change, internal conflicts or political issues influenced e-government implementation in your department (Podder, 2013).

D1: “I try not to let hesitancy a reluctance change, or slow down my work. That's why we are where we are now, you know, I think you'll get that in any organization. you just have to stay positive and work through it.”

D2: “I would say the only way I could possibly be an issue is dealing with some of the shall I say staff member that have been here for a while. getting them, you know ‘old school’ quote on quote, you know and trying to explain to them the importance but it's coming I mean everybody is pretty much realize the importance in the need for having it.”

D3: “I think changing business processes and talking to department heads about delivering things different is better sometimes you have different department who feel like they know it all or whatever. Having that leadership or having the ability to talk to

people and they say there's a different way that we need to deliver it. It took some risk it took some it was challenging but now everybody's really bought into it. You know so I don't necessarily think I have resistance for instance: maybe for that one, 30 and 40 year old veteran who doesn't know how to turn on the computer is used to doing it a certain way with paper and pencil and that's the way of doing it. I'm not I'm never going to convince him to get on a computer. and maybe get his information and be able to create a process for it you know they say people process and technology in terms of that you know what we're going to be able to do you need people you need processes Technologies is very important.”

O1: “It hasn't, again my role has been to shepard social media, so when everyone else is not thinking about it. it doesn't matter because I am, and i'm the reason that it will go. Like me, Jamile Callen, all of us working on social media we know... So its internal conflicts it's not political issues, again if you, it's almost generational. If you do not adapt to the change that's happening with the times which is digital, you are going to fall behind. That's the way it's going, so while there maybe resistance its my job i don't care about that resistance, my job is to do what i have to do to get the message out, and if the dinosaur is in the way the dinosaur will get mauled over. Because at the end of the day it doesn't matter what resistance is saying, the main person who is the mayor has the final say. He is already aware that social media is a priority to him.”

“O2: I've been fortunate with this department in this group of people in this leadership that there's not much resistance to change. but a lot of with this department does is it acts as a liaison between the other departments and the digital strategy. I see more resistance to change when reaching out to other departments. internal conflicts same thing we've been fortunate enough to have a department that has its share of internal conflict but it does not impact the workload. Political influence influence I think that remains to be seen. like with this whole thing is going on with net-neutrality and that brings up access issues as well do not one of the big guys on the internet and able to spend a ton of money on net-neutrality and if you just one of those smaller players then you might be less accessible to Citizens one way or another. so I think on the federal level it remains to be seen, but on the local level like this City government this administration has been so supportive that you know we really haven't had any limitations as far as that goes.”

The interviewees seemed to stress that resistance to change in their department was hindering the implementation of e-government services. All five interviewees suggested that resistance to change is not as prevalent as they had expected, though it was present. Interviews mention how they managed to hire staff with some knowledge on how to use e-government systems. In these responses, the interviewees identified resistance to change existed in some older employees and in certain departments (not specified). Resistance to change and

departmental strife can cause the process of serving the community to stunted. The interviewees described that these issues were temporary, and were resolved fairly quickly after careful explanation of what the new project would do and how it would affect their department or individual. On the city's websites, there were no specific details addressing these issues, therefore it could not verify if these issues occurred randomly or frequently.

The following question asked what role the availability of financial resources played in implementing e-government in your department (Podder, 2013). For this question, all participants agreed that financial resources are a huge part of their departments operations. In the last year, interviewees reported they have not experienced any financial constraints.

D1: "Monies were made available to procure the portal and without those monies we wouldn't have an open data portal." There's no Financial constraints that are slowing down the open data work I would say if I had more money I could use it. We're just in the implementation phase one and in years two, three, and four, we might Procure more software products that can further enhance the use of our data."

D2: "Obviously it's going to be a relatively large factor, I mean unfortunately everything comes down to how much money it cost, how much benefits, how much gain there's going to be from getting those funding. One if you can get the funding to begin with, then too implement it, its not only about implementing but their is also upgrading and managing these systems, its not a one-time thing."

D3: "tremendous role of leadership but you also have to make the financial investment make sure you have the infrastructure to deliver or to facilitate e-government you know whether be the technology or equipment or software all that you have to have some Financial Resources to make that investment and sometimes it was recurring cost sometimes it's about developing app or something like that that has a cost it is not free."

O1: "money as that will always be an issue because money means equipment and it means this or that. We're able to do our work but it would be nicer to have better equipment to do it on."

O2: "A huge role, is would with anything, you know if there was just an endless pit of money than you could always just you know, fix mistakes just buying a new product. But because we don't have unlimited funds we have to be very careful and deliberate in our planning. To make sure the money is allocated and it is going to be spent in the best way. Also our record keeping in looking back at what worked and what didn't, that helps us make better decisions in the future and money so similar to what you would see in the

private sector, in the public sector you're saving money coming in under budget is a huge component of it also.”

On W1 the City of Buffalo’s 2020 budget proposal was acquired. In that budget, participating departments financial lines are expected to increase over time. With these additional funds, the departments should be able to enhance their e-service tools for citizens in the City of Buffalo. According to the information above many departments were properly utilizing the funding they received. The interviewees stressed that money was a huge aspect of their daily operations at work. The amount of funding each department received dictated which departments would be able to implement e-service components to their e-government the fastest.

The next question asked to what influence the availability of technical expertise had on implementing e-government in each interviewee’s department (Podder, 2013). For this question, all participants expressed that technical expertise is available to them through the Management Information System department. Whenever any issues arose, they knew to contact that department. They did not appear to comment on their own individual departments.

D1: “My department's unique in that I'm managing the open data program and there's no one else in it, but in terms of technical expertise we've had a great partnership and interaction with Management Information Systems Department here and a technical lead was appointed, who's been doing the technical back end work within the department.”

D2: “It definitely helps, we use a lot of researching and reaching out to different departments, there are some resources we have in the IT department that know a good amount, but there is not a huge pool of resources. So we basically utilize reaching out to user groups. For example user groups, type of things, from all around the country, finding out best practices you know. Peer to peer is huge, and that's why everybody in this business, we aren't competing with Pittsburgh, as far as this part of it goes, we aren't competing with Boston or New York and any place else, but were all in the same type of business so we share our information and ideas of things that are working, things that didn't work.”

D3: “Some, you know, talking to businesses and talking to university and relying on experts with the technology. I'm not an expert in that and I know what I know, so it's a partnership along the way. Those technology gurus not listening to me or the community

they are going to build something and nobody is going to use it. You have to have a good collaboration and cohabitate.”

O1: I am not a social media expert. So there are times where you feel like, ‘wow I really wish I knew a better strategy to do this, I really wish there was some other way or is there way.’ When someone will ask, can you just do this to get likes? I don't know can I? But you can always use more resources or more knowledge for anything and if you don't, if you're not open to it then you're an idiot. You always should be able to look at things and say, I mean the joy of the electronic era is that it was all fueled by like quick ideas and these ideas were grown and grown and grown because other people were able to adapt to make them better. You want to sort of incorporate that mindset for anything. like I never think that I have the best idea but if what I have works, that's fine. If someone else can come along and say no, why don't you do this? Lets see what that does? And it makes something better you should be open to that.”

O2: “I would say that the technical expertise are widely available, but the most technical expertise we actually get is from the IT department (MIS), which has been a huge resource for myself and others in this department. If there is something we don't understand or if there is something that needs to be built, and we don't have the capacity or know how to do, certainly MIS will be able to jump in and help us out.”

W1 described the goals and objectives of the management information system and how their core goal was to help resolve all IT related issue. The importance of having office workers with strong technical expertise in the field of e-government played a major role when it came to the workflow of a department. The interviewees described that many times they handled basic IT issues internally, due to the quality of staff they had within their department. However, when major issues became prevalent they had no choice to contact the department of Management Information Systems. This department served as a resource for all IT related issues for departments within City Hall.

The following question addressed if technical expertise was available within the department or sourced externally (Podder, 2013). All five interviewees described that they do not outsource services that require technical expertise.

D1: “I have some technical expertise but the real life high-level coder programmer, type people have to rely on external departments for that.”

D2: “Unfortunately, everyone seems to come to me and I'm not saying I'm the most 'tech savvy guy' but whenever there is an issue people are always at my door. I can resolve some of the stuff but If I can't resolve it, I'll contact IT or MIS and have them take a look at it. Sometimes, they may even have to go and fix it, you know, but there's certain times, depending on the issue, if it's a **Cisco** issue or something like that, they may have to reach out to someone as well.”

D3: “We are supported by another department which is the MIS department, so that's an important thing. We have good support from that department because it takes a lot of technology to run the different business processes we have here.”

O1: “I mean again like we don't, there's no real technical thing to Facebook I feel like if you've made yourself a Facebook page like 20 years ago. I probably think that's better question for **Chad** for his part of it, because of the websites is very different thing and it feels like we used contractors to do things like obviously with the redesign of the website, and things of that nature. For like social media for that, my aspect of it is no, not really.

O2: when talking about department to department I would say it's source internally, it's not like we bring a third party consultant. It's all within the City but it's not necessary in the **communications** department.”

W1, W2, W3 and W4 did not show any information to verify if staff members from different departments, aside from MIS were qualified or even used to help resolve IT related issues. According to the interviewees departments within city hall were not accustomed to outsourcing their services, especially when it came to e-government projects. The interviewees responses highlighted how well staff are at managing the day to day projects of e-services operations. What mainly kept departments from outsourcing externally was the fact that they had experienced staff members that could resolve technical issues.

The next question asked what to what influence has the availability of adequately skilled staff to operate e-government services had on e-government implementation in your department (Podder, 2013).

D1: “Yeah it's just me, I think it helps that it was me, because I do have some background in data and data analysis. My Americorps Vista is a young, technologically savvy person and having people like that on staff make the work of providing e-government services easier and if we had to rely on people I didn't have those skills. We'd still be. We wouldn't have an **open data** program.”

D2: "Once again, I think we're in the benefit of having a younger staff, diverse staff sometimes has its challenges and rewards. as far as that goes well kind of talking about the other issue regarding age, culture your social background or economical background."

D3: "Very important because if you don't have the right staff or the skill staff you know to what you're doing is going to affect that, you know. So you don't want to scale up so so fast we have so many experts. But that's still an important thing you have to have the right people to do things that you have been able to do, have to buy into it but you have to have some skilled people to do."

O1: "I mean I feel like, in a way. they've already done that and it's worked. The social media presence before I got here and as I was here it's changed drastically. He is an established person on social media he was on it before but it was very, like just a picture and it was the same picture standing on a podium. You could put almost all the pictures by each other and not know what happened for five years. Where now it's, oh there are other people, because it's not just him it's other members of the community. In a way, t's it's definitely changed because they have decided that it was a priority and obviously adding resources to it such as me and Colleen and naeen, fami like we all work together to keep that going so it is already happened."

O2: "I think there's certainly just access to people, I think it all comes down to training. A lot of the e-government tools that are available are pretty easy to use. They make these things pretty user-friendly. So a person's ability or capacity to perform a digital task, the problem is having more of a leadership, and putting a system in place where people could be trained and learn and used what they learned productively. It's more of a training thing rather than when we need codders, because the technologies we have out there are very user friendly."

The online platforms did not describe the importance of having skilled staff, however in W1, under job postings, there were heavy requirements for citizens looking for e-government jobs which required a college diploma or certificate in related field, and at least 1-3 years of work experience. Four out of five interviewees described that they had adequately skilled staff members within their departments. One interviewee described that he/she was the only individual in his/her department that was able to do the work he/she does. Therefore, the advancements within his/her department were very slow. The individual did have extensive knowledge and skills within the field of e-services, however one person can't do multiple jobs at

one time. Therefore, he/she wished there were more employees like him/herself. The final interviewee mentioned how increased training may be beneficial.

The following question addressed what the final interviewee brought up in the previous question; If their department provides specific training for e-government staff (Podder, 2013).

D1: “So, I kind of showed my Americorp vista the basics of the **open data** portal, in the functionality and the data visualization tools. So, there was some training. Also, a larger **open data** committee I've trained on the use of “Trello” a project management app, that way I can organize all the work that we're doing and without that the project would be very scattered. It provides order, so I touch many different departments with the **open data** stuff. Having that digital tool how to create clarity about responsibilities and tasks.”

D2: “No”

D3: “We do, we provide training for staff, you know, in house-training in terms of information that's coming in and training is two ways, so we provide information but it's important that they provided us feedback”

O1: “No, I wish.”

O2: “So, again, the **Communications** department does not provide any training, but MIS provides general workshops that are open to anybody in the building. To be able to use microsoft office suite, excel or outlook, that certainly helps us become more efficient in what we do. They do a lot trainings and it's free and available for all employees.”

According to the interviewees, three out of five responded “No” to the question and felt that training for e-government was not provided. For those that responded ‘no,’ the general sense was that software and systems were learned on the job. O2 previously described that many of the systems at City Hall were developed to be user-friendly. This could explain why there was no general training for employees. Two directors/managers expressed that they do provide training to new employees, however Office workers disagree with those statements. O2 highlights how MIS offers IT workshops but they were for basic computer programs, like Microsoft suites, excel, emails outlook etc. There appeared to be a communication issue between departments here, where trainings are being offered, but office managers were not aware/ did not have access to them.

The final question was in relation to e-service. It asked participants how would they characterize the level of e-government currently provided by their department (Podder, 2013).

D1: "I put it at a seven, we're in the space but we're just starting out and we got plenty of room to grow, and I fully expect us to grow and get there and catch up to those cities that have been doing **open data** for 5 to 7 years. I think our launch was very successful and I think it's going to propel us."

D2: "I believe our e-government system is decent, I would rate it to be a five/ten, there are much more things we can expand on."

D3: "Eight/ten, I think there will always be room for improvement and growth. I will never give us a 10 or 1. I think our ability to kind grow and create an environment so we can do that, so maybe an eight/ten."

O1: "I feel like we're at a solid seven. They're still not there, it can get there. It's on it's way there. We still have to move it to another level and I think we're heading in that direction, I think that we changed things we do enough to keep it fresh but I feel like we definitely need more somehow."

O2: "I think that we are at a seven/ten. We have made significant strides over the past 18 months. So there's no real signs of slowing down. I think as more and more is implemented and goes on successfully, there's more and more opportunities to implement more, which I think we have been successful over the past 18 months, and a lot of things to be done, and I think the administration has been supporting us to expand on those things."

All participants responded to the level of e-government within their department to be between a five to eight. The reason behind this question was to identify how these individuals self-evaluated their departments. Out of the three directors/managers, only one gave their department a score of five/ten, illustrating a realistic viewpoint that their current e-government infrastructure has much improvement to make. The other two directors/managers did not believe they needed much improvement and self-scored seven/ten and eight/ten. The two office workers did describe that both of their departments needed many improvements and gave them self's a score of seven/ten. These scores represent the opinions of public employees that go to work every day and deal with the daily operations of e-government system at Buffalo City Hall.

The final two questions of the interview were set to evaluate and explore the category of e-partnerships between the City of Buffalo and other government agencies. The first question asked how important is collaboration with other government agencies in your department's e-government implementation (Podder, 2013).

D1: "We do have the relationship with the state's open data portal, we've been able to federate with them and that has made our open data portal much more robust than we have the right to be just at the start because we launched with 11 datasets about like 18 geospatial assets and the state portal has laid about 580 datasets and probably half as many geospatial assets. and all that is discoverable on our portal so that relationship with the state is excellent and that I fully expect that to pay off."

D2: "Inside City Hall is huge, obviously, a lot of times when people from different departments like the fire department, rental registry, different people put stuff out and they've gotten much better in bringing us in the loop beforehand, because they know we're kind of the point person where people are going to call, email, whatever the case maybe if they aren't sure about something. So, they try to share the information before it gets sent out. It used to be horrible, as far as giving communication, and we've gotten a great move forward on that. Is it a hundred percent yet, 'no' it does happen still sometimes, not nearly to the level it was. We do share, like, County Health Department, I'm in contact with them a couple times a week through emails different meetings, type of things."

D3: I think extremely important you know, you can't live within a vacuum. You have to kind of adapt to see what other municipalities are doing. I communicate with different cities about what's going on what they're doing, if they're doing it, so that's an important part. I try to communicate with, like, cities, we deal with snow, so I try to communicate with people who deal with that. I have relations with people in New York City but to compare us to New York is as much difference in size. So, it's always important to have a network of other professionals who are doing what you're doing and we learn from each other. There's no pride in ownership, so it's very important.

O1: Other government, they don't impact us because it's the Mayor. However, I feel that collaborating with other government only, again, is part of the whole web and it can look stronger if everyone is standing together, like, Buffalo billion, when you're seeing the governor with the mayor with every big state, federal lawmakers, you see all them you know something big is going on. I feel like then, if that adds weight to it just by having the governor involved in something, it adds weight to something having the president, even if you don't like him, show up to something, it adds weight to that. When you have partners in government working together on something on social media it should have the same effect, should have weight to it."

O2: "I think it is vastly important because, you know, we see ourselves as different entities like city government, state government County government, but a lot of times for The Citizen, it's just government. For us being able to work together and kind of have seamless processes. Just goes to help the citizens because they're not really worried about if this is a county or city thing. They just know that they want the pothole cover or whatever the case is. Our ability to be of service to them and to work with our partners in government. The better than we do that the better we can services the citizens."

Information on W1 expressed that collaboration happened on special projects and events occurring with Erie County and N.Y State, no specific project appeared to be named. This information could be found in the search engine under partnerships. The interviewees explained how its vastly important to maintain a strong relationship with other government agencies outside of Buffalo, especially with Erie County, and New York state. The reason behind this push was to diminish the waste of resources that could be used somewhere else. According to the information, a strong partnership with Erie County and New York State could enhance citizens services and provide trust with the general public.

Finally, the last question of the interview, a follow up question to the prior one, asked what factors influenced the effectiveness of this collaboration (Podder, 2013).

D1: "I think the state's willingness to partner with us was a big factor, it was a pretty easy lift, technologically speaking, this is kind of like a flip and switch. Yes, we want to federate with the city, eventually will federate back with the state portal, so that it, we will be discoverable on their portal as well. But, there weren't too many factors it was pretty much their **open data** manager saying yes, and I said yes and it happened."

D2: "A couple of things like not duplicating Services, which I think is huge. Especially, the county and us, there's a big lead paint thing going on now where the city is huge on it, and getting ahead of everything. but there's a great collaboration with the county we're working together as partners and, not like I say duplicating services, more than anything else."

D3: "I think having good leadership, I think I'm creating a climate so that innovation happens. Listening to the people that you're serving, you know, making sure that you're keeping abreast of technology, right? The whole idea of people processes and technology is important, as an important, because people have run it, they have to developed the process that, if you don't have the right technology to do all of that stuff that's an important key."

O1: "I guess it would mean that they have to have a partnership in person. "E" anything is supposed to be an appendage to what's existing, to something that's already happening, so there's already no synergy between the two lawmakers in real life, there should be there probably is no synergy in the "e" world, you know what I'm saying? So, like, anything that constituents can pick up on that funny business too. For example, you see them at one thing once every 4 months or something there at something together again it's not that big of a deal, but if they are constantly doing things together like 'oh wow they're opening this and they're like laughing and having a good time there working with these kids and they're doing that,' you realize all these people not only genuinely with each other, but they do like who they're representing and like working together to bring out the best in who they represent."

O2: "I would say technology is certainly a factor, going back to the forms example, if we are all on digital forms and the counties are all on digital forms, but the state has just paper forms. Some of our forms have to get submitted to the state, like for liquor board and things like that, so that would put an obstacle in the way of that work for us if we couldn't get the digital form to the liquor board. So I think everybody being on generally the same level as far as their digital capabilities is helpful to collaborate."

According to the interviewees, increased collaboration was needed between city, county and state in order to avoid duplication of services and enhance the fluidity of services to citizens. Collaboration appeared to be influenced mainly due to technological issues, according to the interviewees, where the state had not digitized all of its forms. With the city and county having digitized forms, but the state being on paper, it seems as if services were slowed. O1 mentioned how these partnerships influence lawmakers to work together on projects. Responses indicated the e-government systems may run smoother with collaboration in place between city, county and state.

The interviews conducted helped this researcher identify where the City of Buffalo stood with the overall process of e-government implementation. The interviewee's individualized perspectives were extremely beneficial to this research. Their responses will be discussed more in the following chapters.

Chapter 5: Findings, Discussion, Recommendations & Future Research

Throughout the analysis the researcher was able to identify the individual opinions of City of Buffalo employees in regard to the city's development and implementation of the four functions of e-government; e-organization, e-democracy, e-service and e-partnership. The interview questions above were created to address these four functions and were separated into groupings throughout the analysis.

The first grouping of questions addressed the employee's individual opinions of e-organization in the City of Buffalo. A number of findings have been determined from these responses in relation to data information, network infrastructure, broadband availability, information security, legal/regulatory frameworks, department size, management and political support. All interviewees reported that data is readily available to them and citizens through the Open Data Buffalo Portal. No adverse reactions were recorded in terms of data availability. Interviewees highlighted how all reports through Open Data are anonymous. This is set to protect the identity of reporters.

Network infrastructure appeared to have a split response between directors/managers and office workers. Directors/managers believed infrastructure was solid and able to support all processes/ e-organization implementation. Office workers, on the other hand, believed that the City of Buffalo did not have the infrastructure or network to support basic office functions. Office workers also mentioned that the computers will frequently break down and it is oftentimes difficult to get them replaced, unlike it would be in the private sector. The final point office workers made was in regard to the lack of training on specific software's used in the work area.

When it comes to broadband availability, there seems to be a similar split in response. The directors/managers believe the broadband availability was good throughout the City of Buffalo and in City Hall. Both office workers disagreed with this, one of them stating that his/her

department did not have access to Wi-Fi and he/she has been completing work on a personal phone. Another office worker referenced the City of Buffalo, stating that broadband is not widely available in underserved communities.

Directors/managers and office workers all reported that employees were trained in keeping sensitive information private. Interviewees state that these protocols provide a guideline on how to distribute service requests without jeopardizing the release of personal data. Two interviewees reported that they were unaware of any legal/regulatory issues that hinder e-government implementation. The remainder of the employees reported that there is a specific department in charge of legal matters, and that nothing legal has hindered the development or implementation of e-government.

Opinions regarding department size seemed to be unanimous. One director/manager (D1) stated that they can handle the position they are in but since they are the sole member of the department, more would be accomplished with the addition of a staff member. Most interviewees felt a high level of support from top management and leadership. One out of the five (O1) stated that they had minimal support from top management, and refused to comment further on the matter.

Overall, there was a slight divide between the perceptions of directors/managers and office workers in terms of e-organization presence in City Hall. Their individual perceptions are further discussed in the following grouping of questions based on e-democracy. This grouping of questions was developed to assess the presence of a formal e-government strategy, departmental goals/objectives in relation to e-government, pressure of external stakeholders, and a perceived need for leadership.

Out of all five interviewees, it appears that only one individual (D1) was aware of an e-government strategy although they were unable to comment on it at length. Most of the interviewees appeared to be confused by the question. D1 reported that the e-government strategy was to focus on digital communication and data availability between themselves and constituents, though this is not an official strategic plan. A number of follow up questions were asked pertaining to the current e-government strategy and its comparison to Erie County or New York State. In response to these follow up questions, many interviewees stated how there is not a formal plan in place for e-government strategy. For individual departments, the idea of an unspoken e-government strategy does exist, however there is no initiative to create or commit to an official one.

All interviewees agreed on the topic of departmental goals and objectives. All interviewees reported that their main departmental goals/objectives are to better serve citizens by providing better avenues for communication. Interviewees did not mention specific goals/objectives for each department. One of the directors/managers (D3) reported a set of “core values” in the prior grouping of questions, but did not expand on this.

When it came to external stakeholders, interviewees appear to be unanimous in opinion once again. All five interviewees reported the main stakeholder as the citizen and mentioned that the citizen has influenced e-government implementation tremendously. Feedback provided through the Open Data Portal has contributed to improved service delivery and new program development. Interviewees stressed how forms are still available in hard copy for older citizens, but transportation to City Hall to obtain said form can be difficult. In order to keep all citizens involved in government, interviewees agree that City would need to do more. JEFFREE WIFI,

which can be found in W1, attempted to address this issue by bringing free Wi-Fi to an underserved area.

Leadership and initiative was the final category addressed for the function of e-democracy. Many of the interviewees were unable to answer the question properly besides the first director/manager. We learn from D1 that an Open Data Governance Committee has been formed at City Hall, which comprises of members known as ‘data liaisons.’ These data liaisons are said to represent many departments at City Hall. Some of the departments specifically mentioned are the Mayor’s Office, the Fire/Police Department, Public Works, Citizens Community Services and the Permits Department. D1 states that the departments were canvassed and felt that e-government services were of the utmost importance in this day and age.

In this researcher’s opinion, some of the interviewees had a more difficult time answering questions pertaining to e-democracy. Though each had a vague idea about what was ‘supposed’ to be said, none of them had specifics to mention besides the directors/managers. This researcher did find the lack of a strategic plan for e-government development and implementation to be surprising. The following grouping of questions addressed the function of e-services. The questions were asked in order to assess for citizen participation, department culture, financial resources, technical expertise and skill/ training.

In terms of citizen participation and communication to specific departments, all interviewees agreed that citizens should be able to access their departments with ease. Departments in City Hall have been able to reduce the digital divide between citizens and local government. The development of new user-friendly websites and downloadable apps has given individuals the proper tools to communicate community needs. Out of all interviews it appears that only one office manager mentioned how limited Internet access in the community could

hinder citizen e-government participation. No interviewees made remarks to income, education, age or language being an issue in e-government citizen participation.

When referring to department culture, all interviewees agree that it has helped in the implementation and development in e-government. One interviewee discussed how department culture appeared to be based more in strong leadership encouraging innovation and thinking “outside the box.” Other interviewees decided to focus more so on diversity within City Hall and it’s addition to e-government in the form of translating materials.

Financial resources were reported to be the key variable in determining how far a department will go in order to execute e-government operations. In this research, all interviewees agreed that financial resources were a major component of their daily operations, they also expressed that the current departmental budgets are substantial to support further e-government implementation and development. Surprisingly, this researcher discovered through the City of Buffalo 2020 budget proposal that each department involved in this study has substantial projected budget increase (Brown, Ball, & Estrich, 2016).

Interviewees all agreed that having staff with technical expertise and skill had improved the implementation of e-government. Interviewees mentioned how having skilled staff in house has lead to a minimization in external support from private organizations. Interviewees also agreed that having more skilled staff members lead to more projects. Directors/managers and office workers were split when it comes to training being offered in their specific departments. Office workers reported that little to no training was offered in specific e-government software that is used in their department; instead, workers are expected to learn “while on the job.” O2 described that ‘workshops’ were offered to employees that have trouble managing general

software, like Microsoft office and outlook. Surprisingly not offering specialized training in e-government software seems to be counterintuitive to its development.

In order to identify the level of e-government, the interviewees were asked to self evaluate the level of e-government their prospective departments fell under. The researcher asked the interviewees to give a number from a scale of 1-10, 1 being the worst and 10 being the best. Their responses reflected a general feeling on how their offices worked through e-government projects. This researcher's finding reflected that the interviewees believed their e-government systems were sufficient/above sufficient. For instance, two directors/managers and two office workers gave their departments scores of seven or above. Only one director gave their department a score of five, which this researcher believes to be more appropriate based on some issues with internal infrastructure.

E-partnerships, the final function of e-government, had two questions that addressed its presence in the City of Buffalo. Collaboration with other government agencies was questioned in terms of e-government implementation, as well as the effectiveness of this. All interviewees agreed that having a strong relationship with other agencies was beneficial to e-government development and implementation. Most interviewees highlighted how collaboration was needed between county and city in order to cut back on the duplication of services being provided to the public. Interviewees discussed how major projects required collaboration between the City of Buffalo, Erie County and New York State. Directors/managers reported that they reached out to cities similar in size and culture to Buffalo and managed to establish a collaborative relationship, sharing in the success and failures of e-government projects. When asked about the factors that influenced the effectiveness of these collaborations, directors/managers responded with an inner desire to 'do better' and office workers reported the existence of leadership. Ultimately, the

findings demonstrated that the City of Buffalo is actively working on strengthening its e-partnership

Recommendations

The purpose of this study was to explore the different departments in the City of Buffalo that were in charge of creating and implementing e-government projects. These projects were set to improve and provide the necessary tools to help citizens communicate and request government services within their community. Recommendations can be seen below based on research findings.

Internal Infrastructure and Wi-Fi Availability

According to interview responses, internal infrastructure was lacking within the City of Buffalo. Outdated computers and the lack of Wi-Fi availability throughout all departments caused some difficulty for staff members in terms of completing their average work duties. To resolve such issues, this researcher suggested that City Hall contact a computer and information vendor that could offer a five to ten year contract. This would guarantee that computers would be replaced and updated throughout that timeframe. Having a vendor to meet the needs of changing technology can become a significant investment toward not only improving internal infrastructure, but also improving the rate of implementations in e-government.

In order to address the lack of Wi-Fi availability throughout City Hall, departments must make it a priority to advocate for internal infrastructure. It appeared that directors/managers were unaware of these issues, since communication was strained between office workers and directors/managers. This writer would suggest office workers directly address these concerns to superiors and possibly start a committee with monthly meetings in order for office workers and directors/managers to come together, share concerns and collaborate.

Future Research and Conclusion

A comparative study between the City of Buffalo and Erie County would be beneficial in order to collect more research on e-government implementation in Western N.Y. Researchers could observe the level of collaboration between the two in terms of e-government projects and duplication. It would also allow for researchers to determine the level of impact Erie County has in decision-making in the City of Buffalo.

If the study were to be duplicated, this writer would strongly suggest researchers attempt to interview members of the Management Information System (MIS). Though they were contacted for this study, all members declined to participate. Interviewing MIS could greatly contribute to understanding the actual technological advances used for e-government services. MIS is in charge of providing technical support and oversight of current e-government projects being implemented throughout City Hall.

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Appendices

Appendix A

Interview Questions

E-Democracy

- 1) Does your department have a formal e-government strategy?
 - a. Does that strategy align with Erie County or New York State's e- government strategy?
 - b. To what extent and how are citizens' needs and perspectives taken into account in this strategy?
 - c. Does the strategy incorporate e-democracy (on-line participation) as well as on-line services?
 - d. Who or what unit within your department is responsible for e-government implementation and strategy?
- 2) What are your department's main goals and objectives in relation to e-government?
 - a. Do these goals align with or conflict with other departments in City Hall?
- 3) To what extent has pressure from external stakeholders (e.g. central government, other local authorities, citizens and business) influenced e-government implementation in your department?
- 4) To what extent has a perceived need for comparative advantage or desire for leadership in e-government influenced e-government implementation in your department?

E-Organization

- 5) Is e-government implementation in your department affected by issues related to data or information availability, appropriateness or quality?
- 6) Is your departments network infrastructure, speed and reliability sufficient to support current and future e-government needs?
- 7) Is the availability of broadband within your department area an issue in e-government implementation?
- 8) To what extent is information security an issue in e-government implementation in your department?
- 9) Does your department have a privacy policy that covers electronic information about citizens?
- 10) Is there an adequate legal and regulatory framework in place to facilitate e-government implementation?
- 11) Are there specific legal or regulatory issues that hinder e government Implementation?

12) To what extent has your department's size influenced its adoption and implementation of e-government?

13) To what extent is there top management support for e government in your department?

a. To what extent does your top management communicate the importance and benefits of e-government?

b. To what extent does a good leadership influence e-government-government implementation in your department?

14) To what extent is there political support (Mayor and Councilmen) for e-government in your department?

a. What effect does political support (or its lack) have for e-government implementation in your organization?

E-Service

15) To what extent are citizens in your department able to participate in e-government?

a. Are Internet access, broadband access, income, education, age, or language, issues in citizen e-government participation?

16) In what ways does your department's culture (e.g. attitudes to and experiences of innovation and change) hinder or help support for implementation of e-government?

a. To what extent have resistance to change, internal conflicts or political issues influenced e-government implementation in your department?

17) What role has the availability of financial resources played in implementing e-government in your department?

18) What influence has the availability of technical expertise had on implementing e-government in your department?

a. Is technical expertise available within the department or is it sourced externally?

19) What influence has the availability of adequately skilled staff to operate e-government services had on e-government implementation in your department?

a. Does your department provide specific training for your e-government staff?

20) How would you characterize the level of e-government currently provided by your department?

E-Partnership

21) How important is collaboration with other government agencies in your department's e-government implementation?

a. What factors influence the effectiveness of this collaboration?

Appendix B

Transcripts by Questions

Q1:

D1: "As of now, yes being the Open Data program most of our presence and interaction with the community is in a digital format, so most of our communications with constituents is through online formats."

D2: "Not a strategy at this point in time, no. I know you're going to meet with another director as well, he may be able to give you some more information on that than what I'm able to give you."

D3: "I would say I don't think it's formal, I think it's something that when I meet with my department heads and we talk strategically once a year, we set up goals. So, I asked department heads if they have specific goals, we talked about it and every year we look at whether we've accomplished that or not. So, in terms of overall big picture strategy, nothing written down formula, but I tend to think that I would like to try to have a road map."

O1: "No, not really, we started to create one based on one that I have, I had from friends working in the digital team for the governor's office. But we had to put it on the back burner because there isn't enough time to do. It is it written down? NO, but do we have like an aggressive strategy or some kind YES."

O2: "I think that we are certainly putting an e-government strategy in place. One of the newer components that we have, especially with our new website, is the Notify-me portal, which allows citizens to sign up and subscribe to different notifications that would come from the different departments within the city. It actually would send them an email or a text message when any new information or updated information is communicated out. For example, if someone was interested in the recycling program for whatever reason, they could subscribe to that department and anytime that the recycling program had a new event for the press release or did anything new, they would be sent a message through SMS or e-mail. I think little small things like that certainly heads into the direction of fully versed e-government strategy, I think we're getting there."

Q1a:

D1: "The cities new Open Data portal is federated with the State of New York's portal. It means that all N.Y State data is discoverable on our open data portal. So we procured the same vendor who hosts both the State portal and the City of Buffalo portal. So our strategies with the state are pretty similar in that regard."

D2: No response.

D3: "I don't know, sometimes government, smaller municipalities within a bigger government unfortunately, we sometimes move in a vacuum. I know in terms of the City of Buffalo and responsibilities that we have in terms of across [REDACTED] or what we do with the [REDACTED]. I try to base those priorities, based upon what the Mayor is trying to accomplish. When he did the State of the City. I try to base those goals or that we want to achieve, to be based upon how citizens interact with us on, through their interaction or to focus groups when we go on the community. Not that we don't try to relate with what goes on in the state, but if there's rules and regulations or laws that we need to do we comply with that but, overall, in terms of am I following with what the state is doing? Probably not. Am I breaking any new barriers in e-government? I say no."

O1: "I don't, I wouldn't quite say the word align is really the word for it. It's more of like, partnership, in fact, I was just speaking with one of the staff members of [REDACTED]. For example: All these lawmakers continuously pat each other on the back, rightfully so, because in Western New York, government does work together a lot, and a lot of really big things have been happening. So that partnership has not really translated well on social media, and so I'm working consciously to change that. I was actually just speaking with some of them if they see us put something up or if you don't see it, because, as you know, an algorithm controls Facebook. We have said here are some times and dates to check when we post something you might wanna share it, and just say 'proud of the work you do.' That partnership shouldn't just be at a press conference because most normal people don't go to press conferences. They don't understand how we received messages in the Facebook for the Mayor to do everything. All levels of government, I think people don't have a basic understanding on how the different layers of government work. They feel like by sort of expressing it a little bit more on social media, it actually will educate people but also understand better how partnerships and governments work together."

O2: I think that with the development of it, and the more we are able to put the strategy into place and start using some of the components the more opportunities there are to merge to different strategies and kinda streamline everything into one, because as you know, when things are digital it's easier to keep track off and it's easier to merge into different processes. So i'm not sure where the state and the county are as far as where they are with the development of their strategies, but as i said as the city of buffalo gets more and more versed in their strategies it will be easier to kinda collaborate.

Q1b:

D1: "So there's a couple ways that the community can interact with the open data program, one of those ways is through our suggestion, a dataset functionality. When the community wants data they can either FOIL information (freedom of information law) or now they can go to the Open Data Portal and see our daily activity. If they don't see a dataset they're looking for, they can always comment and suggest a dataset through the

portal which lets us know that the community is interested in that data, and we can start the process of properly releasing it to the public.”

D2: no answer

D3: “So we do have online services, we have a menu of many different things will, weatherby, you know, putting a complaint on an issue in regarding the service request, whether it's paying, making payments, not just for parking tickets but paying taxes or bills. Whether it's grabbing information you know what department regarding the event or putting out events that are happening within the city. I'm a big proponent of e-democracy and how we are able to listen and how to be. Quite honest, everytime that somebody makes a call or put some issue and has a form of listening to somebody, how people vote, I think people let us know what's going on by issues that affect the community. I'm really big with equity, you know, and how some communities will access e-government and then some don't and then where I know where some areas, there are pocket where I know they should. So how do we get to those people to participate so we've used it many different ways. The Mayor has about a year-and-a-half ago, two years ago, we had we just changed all our codes we call it the green code. Where we've updated different codes and regulations and terms on developer as way to build and it hadn't been updated and over about 60 years. We used the power of putting information out and listing to the people and understanding that we have an Open Data portal, and we've open up different datasets. We develop an open data policy. We put that out to listening to hear people's concerns and not even that for them not only write to us about what they felt about it, and we use a tool or app called the “Madison project” and so we were able to put something online and people were able to comment and get citizen feedback, not this one the whole thing but how “I don't like” this “I'm lying here I don't like this paragraph” and that was when getting this type of feedback, it can be challenging because sometimes government is insular however, the good thing about these challenges is that at the end of the day citizens have an input. My goal is to be as transparent as possible and being able to encourage e-democracy, and providing more channels of communication for citizens to voice out their opinion and be informed of what is going within City Hall.”

O1: “When it comes to social media they have everything to do with it, I mean because at the end of the day, it isn't about who's page it is, it's about who they serve because it's about what their job is. So in the context of the mayor's office, everything we do consciously tries to show the footprint of the community in not only the initiative that's happening or what the reason of the photo is but, it also takes an account to show that this community isn't just a bunch of white people standing with shovels this shows every single. We try to show every facet of the people that are actually in that community to give everybody a true idea, nobody wants to see a staged photo. People living in the neighborhood need to be able to relate to it or why would they even care to get it noticed.”

O2: “The needs of citizens is the main factor in a lot of the things that we do here. There's several mechanisms that we hear our citizens through. Our Facebook page is one of them

and that has been a huge platform for us to be able to reach out to citizens and also have that two way communication. Also, we do things like our monthly newsletter, other forms of communication that we've put out and 311 self service helpline at citizens are able to call into and a lot of that is automated and the way that request come in and the way that we handle them are certainly centered around the citizen in their needs.”

Q1c:

D1: “They can interact with us, they can obviously go in and see everything that the city's doing through our data and it kind of increases transparency and increases more informed communication between the constituencies in the cities because we can start using data to have more informed discussions.”

D2: no answer

D3: “We do have online services, when it comes to putting a complaint or addressing an issue with a services request, citizens also can make payments online, and making general information of events, or services out to citizens. We need to increase participation in term of government, weather it be e-government or hearing the seintements of residents that's an important way. We do that by people calling, we do that by having meetings, we should be doing that in a way, of kind of democratizing, people's choices, by going online, or hearing them in a different way. The more channels people have, channels meaning an online app, going on a computer, calling, all in more what channels that they have the better we are.”

O1: “The online services aspect is kind of a slippery slope, like, there are people that you still don't seem to call 311, instead they will message the Mayor. So I will, in turn, end up having to message 311 to help them so it does work in that aspect, however, we obviously prefer 311 because the service works. I'm able to help get them in touch with something, however it's faster for them to go that route then just asking the Mayor, you know, but you, in a way, through social media, I mean there are people that never know what services are available until we say something about it on social media. Which is why it is important we have press announcements for everything, because then people are like ‘oh I didn't know I can pay my parking ticket without ever having to go there’ or ‘I can do this and this and this’ you know or pay my parking right on my app. While it doesn't necessarily work as a service it's still functions as one in a way.”

O2: No answer

Q1d:

D1: “I am solely responsible for the implementation of e-government in my department.”

D2: “That would be my director, I oversee programs that are currently running through our department. “

D3: “I am, as the department head, you spoke earlier with **Bob Coote** who runs the **311**. I have multiple units of departments I run within this department, at the end of the day,

being department head, that's my ultimate responsibility to listen to my department heads and my unit heads and kind of develop strategy and move forward from there.”

O1: “██████████ is a different component of that: ██████████ in generally is in charge of the content, however the execution falls on very different things. I strictly execute all social medias stuff. However, I don't do a lot of the live video, others do that. I focus on ██████████ that we use for that and for other things such as marketing or whatever I try to ██████████. ██████████ deals with the website and digital on that end. However, we all rely on M.I.S if our computers don't work so it isn't just one person is part of the E-strategy I mean since we're talking about Electronics we also can't say that MIS I don't know what their role is in. I just know if my computer doesn't work, that's who I contact and with ██████████ with the website he probably has to deal with far more because that is ours. Do you know what I mean, like the website is ours so I don't really know how they work. How it is part of the strategy we are part of the ██████████ so we are the strategy.”

O2: “That would be me, my title is ██████████ but I also work a lot with the graphic designer, of course, because as we begin to brand the city little bit differently, she's been a huge part of that and also our ██████████ officers who do a lot with the media and other social media aspects we can all work in together, to put our best digital footprint forward.”

Q2:

D1: “So our main goal is to make the city's data electronically available in easily accessible machine-readable formats so that people in the community, researchers, application developers, and entrepreneurs can utilize the data we're providing. Then, enhance the use of that data more so then just sitting government to do alone. So, it's kind of like breaking down the silos, boundaries and limitations, a bit and sharing the data with communities and this is a new thing in Buffalo but cities and states and countries have been doing it for about 8 to 9 years now.”

D2: “E-government wise is just a way, for people to access city services using the internet, phone whatever other Technologies out there we have mobile app. It has been providing online services for people, where they can report 24/7 whatever the issues may be.”

D3: “One in the ██████████, it's chief commodity are people. My job here is to my commodity, is to hear and listen to what people have to say and try to catalog those particular issues so that departments could respond to them in an efficient way. That is why it is very important for me to make sure that we prioritized customer service in many different ways, not just listened to them on the phone but also how we can input the issues and how fast we can resolve them. That's why they have implemented a status bar when jobs are requested through the department.”

O1: "Getting the message out is our main role is making sure citizens know what's available to them and making sure that whatever the Mayor's implementing gets known, because what's the point of implementing anything if citizens don't know it's there to utilize. I think we do a really good job of making sure that they know that something's happening. If the Mayors doing anything, why not let the people know what you're doing anything, even if it's simple and human. Me, myself, I like the fact that we have a Mayor that is not only telling me what's happening in the government but also what's happening in his life. You know like where he will share little intimate tidbits here and there about like his wife and his son and things that, you know, holidays and whatnot so in a way it's definitely nice in that aspect of not just governing but also humanizing. Because government at the end of the day serves the people so it shouldn't be so cold and institutionalized it should be a person. In a way, it should feel, it should have a heartbeat."

O2: "I would say the main goals and objectives of our department is to really provide that platform for a two-way communication so that citizens feel like they have a huge wall between the cities and people who work in government services. Making it easier for citizens to reach out, making it easier for us to hear them in and take that information and also be able to track some of that process and practices that we do. So we could kind of be continuously improving the things that we do."

Q2a:

D1: "I would say more so align than conflict with. I know that there's a lot of departments that receive a lot of FOIL requests and they're excited at the possibility that those FOIL request will now be reduced because they can direct people to the Open Data portal to get the information that they're looking for. So it kind of, we're looking at reducing man hours, reducing paper costs associated to it, or sometimes I think people put data on CDs if it's so large and just having it publicly available anyone can go access it at any time of the day 24/7. It completely changes the way we interact with the community in electronic format.

D2: No, I don't believe our department conflicts with other departments, if anything we sorta rely on other programs developed in other departments to help us deliver services to citizens."

D3: "The Mayor views the city as a big Corporation, you know, if you had an issue with your phone your calling they give you a ticket number, you know, and you should have an expectation of a result, you should be able to do that with government. We understand that this is a big city and things are going to happen. You know, most people understand that it was going to happen. Most people want to have a line where they can talk to somebody and things to be fine. These systems did not exist before Mayor Brown. The Mayor of Buffalo specifically wanted the work they were doing, to be able to have and show it as quantified results. I want it to be, how to make sure that we are listening to people it will quantifying it we're letting people know about what we're doing."

O1: "Not really, I mean City Hall functions for the people so everybody kind of works together to make things happen, I mean yes, in a way, there are certain things. We don't have Wi-Fi, which is crazy to me there parts of the city that have Wi-Fi, and the [REDACTED] department doesn't have Wi-Fi, so yes we do get in our own way sometimes."

O2: "I say these current goals do align with other departments in city hall, a lot of the things we do is to not only make things easier for the citizens, but also make things easier for the city government workers so that allows for an environment conducive collaboration. Things are easier and streamline, digital in a lot of cases is the way to go."

Q3:

D1: "In implementing the [REDACTED], I have interacted with community members who have been wanting [REDACTED] for a while in Buffalo and now that it's here they're very excited and along the way they've helped us kind of craft our [REDACTED] policy. We put out our open data policy draft in an online format for public comment. People could go in, comment and highlight certain pieces of text in, that helps strengthen our [REDACTED] policy and then I continue to interact with people. They have helped make our dataset stronger. The more we interact with people who have been working in the space the more effective and useful our [REDACTED] program is going to be."

D2: The pressure has come through many FOIL request, that come from citizens, lawyers, and, at times, police departments. Now, with the implementation of the new Open Data portal we are able to direct those individuals there to easily acquire the information they need.

D3: "Federal government you know, I'm a big believer that municipalities Mayors, Mayors make this world go the way it's supposed to because mayors deal with everything from potholes to insurance and health insurance too overtime to everything. Mayors do it all, sometimes the high level of government they see the big picture they don't know sometimes like the president may not know the cost of a loaf of bread. We need to know that, you know because they deal with it pictures stuff. But sometimes constraints from federal government have or the lack of resources that they once provided are not there. We can't tell people that we can't do this because at the end of the day people who live in these community, this urban community have an expectation that we should be doing that. Sometimes the constraints it the federal government taking resources away from us, by changing rules or putting ownerish regulation sometime we'll have that effect. Would have an effect of the municipality, in terms of some other municipalities we're fortune in the City of Buffalo that in this area we are probably the subject matter of experts in this area. We have a pretty robust call center we have a pretty robust way of how we look at data in fact if I wanted to I could probably contact other municipalities and take their calls because in order to have a call center, I don't have to be in the city or municipality. We have a system that so robust City of Buffalo I can probably take calls from any town of municipality in Western New York."

O1: "Citizens have the biggest influence for our e-strategy almost 100 percent, they are the taxpayers they are the ones who chose Mayor Brown's vision. So they believe in what he 'in theory' because he was re-elected they believe in his strategy towards making the City positively grow. So their feedback its part of the wheel it's part of what keeps a going. So if out of nowhere a million people were telling the Mayor's page like this is a terrible program it would not be ignored because that is a direct channel into his office. So it plays a major role and obviously we look at what the citizens are doing. As citizens ourselves but also everybody is kinda on social media so we're always like all that seems like a really cool thing we can do here."

O2: "The citizens are obviously living in a digital world and so they want to be able to interact with the their local government as such so it's important that we try to keep up with the times and we continue to innovate our processes so that you know the alignment with what's going on out there in the real world. digital definitely, I think the most pressure comes from the citizens in a local government. Because we are trying to cater to their needs."

Q4:

D1: "Yes, we formed an Open Data governance committee, which is composed of data Liaisons from the major City Department's like fire, police, Public Works, permits, Citizen Services, Community Services, etc. They see the need for a better digital presence and they've been willing to work with me to get services out of their departments and make it available online so it's easier to use for everyone."

D2: "We mainly have focused on trying to provide our services 24/7, based on the data we have there has been a demand for our services after hours. We are trying to provide our services to everyone at any time. Basically just managing and seeing what request are coming in, and what people are truly looking for. A different agencies may be looking for as far as getting that information out to make any more self-service of also they don't have to call during 8:30 to 4:30 Monday to Friday, everyone schedules not like that so it's just a matter of finding what the needs are really, of all the stakeholders Weather be the community. We get a lot of requests from other departments as well as. As far is where the hot spots are for different issues."

D3: "I think data, i think listening to people, I think in e-government or how we do that it should encourage. you know I set the sails for other department heads, I definitely think it's an added plus. you know and it should help policy and how we do that. We shouldn't feel like we develop a policy in a vacuum. We should have a channel to open doors to listen to people to help us shape the policy that we do. Everything that we do i try to have a focus group of people, we run things by listen and hear, because it too easy for me to feel like I know what it is you know and you know week-to-week throw it out and we want to hear comments. If what we're doing is not inspiring other department heads or leaders or unit heads, to think different in to be inspired the think about different programming we're in the wrong business. So this Mayor encourages that you know he's

not monolithic with his leadership, to listen. He tells this and i say this, the answers to how we solve today's issues within urban government does not lie in this building. It's in the community. In so incumbent upon us to find different ways to hear what the community saying. some will go out and go to community meetings some will create an app, some will create you know something online to hear what people have to say about e-government but that's an important thing.”

O1: “Everyone in our department has the ability of leading a project, in the recent years we have acquire more staff, which have taken on more tasks. That boost in our department allows us to deliver better cleaner message for people. to understand what we're doing, Another factor was adding more people to the mixes that encourage more creative ideas and initiatives that have benefited the community. yeah well our department is different in nature in the fact that they really didn't exist until a few only so many years ago, so and before I got here there it was very like everybody had it seems like that they were trying to do a lot with a short amount of people. Now that they sort of boost of the department where you able to do a lot more and deliver the message better cleaner clear for people to understand what we're doing, I think it's also adding more people to the mixes added more ideas to an encouragement of initiatives that have benefited the community.

O2: “I don't feel much pleasure for the federal or state government but more so from the citizens, the citizens are living in a digital world so they want to be able to interact with local government. So it's important we keep up with the times and continue to innovate our processes that align with what's going on out there in the real world. The most pressure comes from the citizens as a local government trying to cater to their needs.”

Q5:

D1: “Yes, we're constantly working with data. Identifying datasets within departments, also checking the quality of it, and making sure that there's no protected or sensitive personal information that we're releasing.”

D2: “Yes, definitely, a lot of the stuff (calls, or need for assistance) we get here aren't always service request, just people looking for information. And the more information we can pump out to people, you know, the better it is, the less people have to call and find out. You know, call to try to find out why people don't know. A lot of people do know to call ■■■ for certain information, some people don't. For those that dont we would try to make that information available online where people can just almost like Google but City of Buffalo Google type of thing, “knowledgebase” what we're looking to implement that will definitely assist with all those.”

D3: “I think all of those are affective not in a adverse way but also in a positive way. the more data that we have and you know data can help make, I'm a big believer that data equates to making better decisions, we should be able to make an investment in that, make sure that departments have that and was looking at that, you know, because when we using data to help make decisions it's better we don't have to go on something

subjective, but anecdotal. We're looking at information I don't have to feel like I'm profiling because I'm looking at the data! I think data and looking at information in government also can help with inclusion and issues of equality where I can look to see how some people are participating and some people are not. People who are well-off and looking at going to call it going to recycle I got to make sure thing that happened for the areas where they're not because they have renters or they're not home owners whatever and not always going to call because they don't have confidence in government. So when i see area that should be calling 311 or I should be accessing head tells me I need to do something better there than tell me that they don't care just tells me they don't maybe they don't have to try to call when you can call it awareness some people that they don't have the confidence that we going to do anything about it you know I cross to bear I don't say that little bit we should know about that I should know about somebody who lives on the street and this kid is walking from home to tell her school and she's walking by 5 abandoned property the street sign is crooked this cracks in the sidewalk the light don't work I should know about that somebody to let me know what I'm saying and because if I know about it then you putting us on notice we should do something about it right and then if I did something about it imagine her outlaw.”

O1: “that 100 percent we've actually started looking at data, since I came on board I track data as in are we adding more people. it's one of those things where if you don't gauge where you've been come from you won't know how far you've gone so we continue to add people people continue the light in the share and that only grows the page which means you're growing this Marketplace of ideas for the community.”

O2: “the implementation of your e-government is affected by all of those things, access to information there's so many different divisions in departments and directors and commissioners of those Division and departments. There's a lot of stages that a process would have to go through before it's finalized before it's actually approved because it impacts so many different moving pieces everybody has to be on the same page and be on board with new implementation. For instance a lot of the forms that we have online or still paper forms and we want to switch them over into digital form so people can fill them out online and submit them online. Some limitations are forms that have payment associated with them it becomes more complicated because then you have to get the finance department involved and then now accepting electronic payments everybody's going to switch over one time so now you're accepting paper payments and electronic payments and sometimes that could shake up workflow. A lot of different nuances that we kind of have to get through because you know we have have 16 different departments so that that's certainly impact implementation. -Quality and inappropriateness I think that goes back to what I was talking about with their graphic designer it's been a huge benefit for me and for the Department to have a graphic designer. Her talent and ability because then everything on a cloudy level an appropriate level could be standardized so we we don't have to worry about that as much as we did before.”

Q6:

D1: “from my perspective, yes, we partnered with ██████ to host our open data portal, and they are a leader in the open data field, with well developed software and that is reliable and excellent.”

D2: “90% I would say, we've had a couple issues with MIS (Management Information System). I don't know if you have been able to talk with them. But we have had a couple little slip-ups but nothing majors to compromise our department and services we provide. For instance we had the our phones lines go down a couple of times but it was short-lived, where, you know, people may be looking for something online, can't find then call us, but it was went down. Out once in a blue moon our software program, which is what we drive on, have had issues in which is also a way people can report via the mobile app and online so but it's been pretty good.”

D3: “I believe so, and I believe we made significant investment, you know, what I need with my department as we talk about what we want to be able to do it so we thought part of this is making a significant investment into the infrastructure... we have to be able to be scaled up and down, you know whether it is a snow emergency or weather would have taken one simple call we have to be able to handle that.”

O1: “No, it needs a severe overall I think, I feel that our computers are archaic at best, as in it sometimes almost crashes while I'm trying to do basic functions of my job which isn't good. I think that we are on the road to improving it, it's just it's very slow, and it shows the disadvantage in working in government it takes longer to adapt it just the way it is. It's not as if you were in the private sector as a company that's investing you would just go, when I was in the private sector I would go and say, this isn't working, this computer isn't working and it would be fixed or a new one, or, hey this computer is not handling basic ██████ needs so I need a new one. It wouldn't be, it would be 24 hours, and I would have a new one. It's very like make do with what you have. I have to do 90% of my work on my phone. Because this is the newest phone out there. That is definitely a disadvantage, were able to do it, it's just I feel like it would be better if we had better stuff. But i'm sure everybody feels that way.”

O2: “The short answer is “NO” but I think that we certainly recognize that and we're working towards getting all the infrastructure up to speed to handle a lot of the different technological developments.”

Q7:

D1: “No, we have reliable Internet access and I haven't had any complaints about it.”

D2: “The internet is pretty reliable, every now and then we'll get like 15 to 20 minutes. Where software may be running a little bit slow, I think that's when they running crazy reports upstairs in MIS, something like that but we really have no issue. There has been a time where we have lost the software for a couple of few hours. We would post up a message on the homepage “please call 311 we are having server errors” and then we would manually write down information. Once the software is back up we would have to

input all written material into the software database. Which at times it is a very time consuming issue that needs to be done.”

D3: “No, not with us.”

O1: “Well, while we have the Internet we don't have Wi-Fi, in the office of [REDACTED] if you're supposed to have Wi-Fi in any part of this building it should be here. Because I do 90% of my work on my phone, it's just draining battery power constantly because here I am doing work. I mean this is my mobile desktop I take this with me when I'm with [REDACTED] and I'm [REDACTED] with it and I'm doing things in real time, citizens expect that and they should expect that. So it's just, it definitely, like, is weird to come in here and still be doing stuff on this because my computer is on its 250th update from 1812.”

O2: “No, i would say no because broadband is widely available.”

Q8:

D1: “It's a big issue there's a lot of data that the city collects, which is people's sensitive personal information. Personally identifiable information like Social Security numbers and things like that and we wouldn't want to put any of our constituents in danger or make them less secure because of the work that we're doing. So we're very cognizant of making sure that the data that were putting out is clean quality, data that is expressed in to account privacy concerns of our residents.”

D2: “Security is pretty important we get a lot of F.O.I.L requests for many different things. To protect our citizens we like to give them a choice to be anonymous. A lot of our request are sensitive whether it be police-related or complaints about neighbors.”

D3: “I think it's very important given folks privacy and anonymity, due to many folks not wanting to share their information when making complaints of issues happening in their community. It give a sense of transparency of how security works. Which gives citizens a peace of mind, because we aren't selling or using their private information with malicious intent.”

O1: I don't know about that to much. That would be more of an Mis question, because we don't really control the firewall. I know that we have the gates (blocked websites) lifted more for us because we have to be able to use social media. A lot of places I've heard that other departments do not have access to it in their departments. I don't really think anything really inhibits us than that nature.

O2: “i think information security is a huge issue, especially if citizens are paying bills online or giving out sensitive information online to the city. We have to make sure that our pathways are secure enough that they are protected from a hacker or any other compromising situation like that.”

Q9:

D1: "I think that's ingrained in our open data policy. We speak to it (located on the website of the open data policy homepage) we define what is protected information we, define what is sensitive information and then we say that we're going to make information available but we redact anything that is protected or sensitive information."

D2: "We deduct all personal information regarding personal information to never give that out in any kind of way that is our policy. At times we share it internally with other departments need be. But we don't not give that information out. For example: permits and inspections cases that used to go to them the way we used to have it is when we sending a request to somebody contact information of the collar is on there cases where inspector and your neighbor is complaining about you, which created major issue so we'd like for their process for housing we've taken off the contact information." I just buy for whatever reason the only time we share the information with inspections now is if it's an interior inspection because they have to make contact with that person to get in the home usually the renter because something is going on inside the property."

D3: "Yes we do, because we take in information so all of our workers or I'll call-takers are about some confidentiality in terms of what they share and how they share it and it's important thing."

O1: "We don't really, I don't feel like we are really collecting any information. I mean other than like our facebook and their terms of agreement that we use with Facebook. We're not taking any information. We're not holding it anywhere, and we're not doing anything with it, due to it being in the public domain."

O2: "Yes, we do have a privacy policy that everybody reviews in their employee handbook when they first get started working here. Also we review different components of the privacy policy in our monthly meeting, things change so rapidly and a lot of us are part of digital networks outside of work in the city government so but with that said we'll always representing our jobs as city government workers."

Q10:

D1: "For my department, I've worked with legal staff to come up with the open data policy. We have discussed each dataset, and we make sure that there is no legal concerns. Especially sensitive data sets, that may have some concerns, we run past the Law Department. Also, in our initial load datasets, I ran everything pass our Law department, So we have a pretty strong legal framework in place."

D2: "Not that I'm aware of."

D3: "Yes, we have great lawmakers and corporate counsel at the law department that work with us, in order to implement new projects. Its within the framework that we have which its prescribe to create. I think we have what we do, the climate here in Buffalo is pretty great, what we have, what lawmakers and our Corporation counsel at Law Department."

O1: "I don't know. I think one of the reasons why we should probably finish writing up are like social media policy because we don't really have one in place because it's so new, so it's basically in the works." I don't know. I think one of the reasons why we should probably finish writing up are like social media policy because we don't really have one in place because it's so new, so it's basically in the works."

O2: "Certainly Yes, that's one of the challenges of just being able to go out and implement whatever the e-government strategy that we want to. Everything has to run through the Law Department for obvious reasons so they are able to troubleshoot and red flagged a lot of our processes before they implemented."

Q11:

D1: "I wouldn't say it's hindered anything I would say. it's made the process a little bit longer but everything in the process is there for a reason so No. and personally I am okay with such structure. Our implementation phase was pretty quick comparatively speaking to other large-scale IT projects."

D2: "No, not that I'm aware of."

D3: " I can't think of anything right now that would hinder you know I mean. Our job is to listen to hear what folks have to say and in the various channels and I think listening and hearing ebbs and flows. What people say is can be cyclical at times but our job is to listen."

O1: "Not really, I mean, I know that there are copyright issues that you have to pay attention to, obviously, we can't be like, we'll just take this picture and use it as ours. Those are just regular things that everybody would have to be careful of, whether its government or not you have to obey the laws and rules that regulate the internet."

O2: "Not really much I can think of, I think just the speed at which it comes to fruition so, for a while we are waiting for legislation about e-signatures to come down from the state. Again, some of our forms, we wanted to digitize them but, some of them required signatures from the state. We're waiting for that legislation to come, to come down, and say that e-signatures are just as good as regular signatures."

Q12:

D1: "If there were more of me, we'd be further ahead than where we are now. That means more datasets to be input and released, improvements on visualization of information. Also, more interaction with citizens, with that being said we're doing a lot with a little."

D2: "There was a perceived need of City services being requested from citizens, the high demand in calls and flow of internet activity has allowed us to request more funds into our department and expand our team in order to handle such demand from citizens."

D3: "I think we have a good size at the moment but with the ability to scale up, if we need to and grow, you know, we designed a system that way, you know, but I think right

now we're pretty responsive too, we look at our metrics and I will respond to the folks and we try to keep that.”

O1: “I mean we don't really have a big department so it really is small, like, it's just, I feel like the more people in government understand what social media is and what the power is that it has in the effect that it has in the fact that it is not an afterthought, it should be the first thing you think of, because that is the first thing people are looking at to know what's going on. so I feel like in a way it's almost down played, to some degree but it should be a little bit more prioritized. “

O2: “I think the size of the department is only contributing to the implementation of e-government, there are so many moving pieces within different departments and each internal department. A lot of it comes through the [REDACTED] one way or another. so I think having the amount of eyes, ears and hands, that we do have that makes delegation a lot easier.

Q13:

D1: “I think the mayor spoken in his state of the city address and our open data, and open house about the need for open data and all the benefits it will have for the city. I think he gets it (the importance of enhancing it applications and developing e-government services). I think we're heading in that direction we're becoming more increasingly digital world and the city needs pace.”

D2: “High”

D3: “So I believe you're the top management here my boss which is the mayor report directly to the mayor and so he's actually very supportive exactly this department didn't exist before he got here at all until 2006. and ONE OF HIS FIRST MANDATES WAS TO CREATE A DEPARTMENT LIKE THIS.“

O1: “Minimal Support”

O2: “ there's a lot of good top-level management support in that, they really push us to be Innovative and to share new ideas, and really create an environment for that. but also on the other hand there's some departments are kind of stuck in there more archaic ways, a lot of times it becomes a in education strategy and try to educate people about some of the e-government strategies and implementations and why we're doing what we're doing and how it will make it easier in the long run. Some people just like to stick to what they know.”

Q13a:

D1:” I think the mayor spoke on this in the State of the City address about the need for open data and all the benefits it will have for the city. I think he gets it, the importance of enhancing it’s applications and developing e-government services. I think we're heading in that direction we're becoming more increasingly digital world and the city needs.”

D2: "High"

D3: "So I have weekly staff meetings and its also written as you walk through you saw our mission statement. It's written on the wall. That we have core values, you know, that are written on the wall. You know i'm always stressing too, when you are in the people business in listening and hearing and understanding. And also tracking, you have to make sure that the level of standards in terms of facts with me. And we make sure that folks understand that."

O1: "Our mayor is very hands on, a lot of people a lot of elected officials are not. The mayor is very involved in every single thing that goes out. Nothing would ever go out without his support, he kind of almost prides himself on being more Hands-On about it. At the end of the day, it's his voice and I think that's a smart, I think that any elected officials should feel that way because it should be an extension of you. So when we're posting things, it's not phony, it's actually him, he does change things and writes things. It is definitely kind of cool to work for someone in government who wants that active of a roll and, honestly, the other upper levels of management do also weigh in and stuff. So it is it is very well done in my opinion."

O2: "Like I said before, just going on the same page, and to have everyone with similar goals that helps in any type of implementation, especially talking about digital half components, because it is important so I'll be able to meet people in the middle where they are, if it's training or if it's any type of extra educational piece."

Q13b:

D1: "The Open Data program would not exist without strong leadership."

D2: "It is extremely important to have a champion within the office to push for new project and influence others through strong leadership to set a standard in the office. Stuff like that, and showing the need seeing the need and demonstrating the need to others why we need to push this out you got to get acceptance roll this out, you know without a champion to push that you're not going to get there."

D3: "I think this is very important, I think you have to have them because you know my boss who's the mayor of the City of Buffalo looks at this as a priority and I see how because he does that it allows us to be incorporated within the fabric of government. So this department touches all the Departments where we feel that our operators, our call takers, know more about what's going on in this city than any other, probably other staff person, because we have to, we can't tell citizens we don't know what is going on."

O1: "The more with the times the leadership is, the better e-government becomes. Because it's involving e, the "E" in e-government is what makes it so tough to keep up with, because technology moves faster than anything around. So any lawmaker or anybody involved in government can't afford to not understand it anymore. It shouldn't be like, oh maybe i'll post on social media once a week, No if your in government you

should be plugged in every day. Because that's the best insight that you're going to have to the people and also the best access I feel.”

O2: No answer.

Q14:

D1: “The Mayor is obviously extremely supportive of the open data program, our procurement of ██████████ past in the common Council unanimously. So they feel the need for it, which gives me a sense of full political support for the work that I am trying to get accomplished. So I feel like I have pretty strong political support for the work that I'm doing.”

D2: “Very High.”

D3: “High support, I'm allowed to look at new ideas and perspectives of things that are coming in, I think there's tremendous support, its gotten us this far, I'm allowed to look at new ideas and prospective things coming in. I think that's an important thing. If you walked in any other department it doesn't look like this department. No other department looks like this one.”

O1: “The mayor's is behind it 100%. City council or common Council they have their own so obviously it's a priority to them. As of how much of it is, you would have to speak with them because we do not work together. I do not handle theirs they don't touch the mayor's we are separate departments ours is much better.”

O2: “So I think that's one of the strong suits of this city government. In particular their is tremendous support for the mayor in the councilman. it's something that is prioritized pretty high and their goals of trying to keep up with technologies in the private sector.” so I think that's one of the strong suits of this city government. In particular, there is tremendous support from the mayor in the councilman. It's something that is prioritized pretty high and trying to keep up with what's going on out there in the private sector, in the world how citizens communicate with each other and communicate with their government.”

Q 14A:

D1: “If I didn't have it, I wouldn't”

D2: “Very strong we wouldn't be in a place we are right now without the support that we've received mainly from the mayor but also many council members as well.”

D3: “I don't know I haven't experience the lack of support yet. I think it's been a pretty supportive environment and I think there are many things that I've been able to bring to the mayor, common Council. I think we wouldn't have a 311, we wouldn't have an Open Data portal, we wouldn't have a Civic Innovation Challenge, if there wasn't any support and those are all forms of using data through our e-government systems.”

O1: Did not provide sufficient response, see Appendix B for details.

O2: "I think it's really important to have that support because, like I said, there's somewhat of an education piece to all of it too, and that takes time and resources. So, if we're not allowed the time and resources to not only implement whatever digital strategy it is, well first we got to come up with the idea and procure a digital strategy and implementation process, and then the education process, so it's kind of a long road and getting all the way to the end because it's not just a one day. That support is monumental in getting anything done."

Q15:

D1: "There's been a handful of ways that citizens have able to interact with us. on the open data portal there's a suggested add functionality. They can contact the dataset owner and they can comment on each and every dataset. We've held open data open house, were we have invited the community members to come in and listen to speakers from regional and nationally known speakers about open data. Tomorrow we're launching our Civic Innovation Challenge, which challenges app developers, coders, computer science majors, and technology professionals to take our data and 'spin up' for a unique creative solution using our data and I'm were also planning a Citizens data Academy to teach active community members how to better use what we're putting out there on the open data portal."

D2: "Basically as we mentioned before, online going to 311 webpage, or the mobile app, those are basically they can do that, also parking to have ways to help citizens, their app is called Buffalo Roam. They have gotten good use out of that so ive heard, because people use it more and more."

D3: "I don't think there is issues, I think you know sometimes and some communities may not have access to the internet or to broadband I think the Mayor has gone and his looked at certain corridors to team up and kinda provide broadband access in certain communities, you don't want cost to be a determining factor. Especially with young people to have access to that. In certain underserved communities we been able to provide corridor where folks can have access to the internet."

O1: "100 percent, if they have internet access they can participate, if they have social media and if they don't they're Stone Age person. But if you have social media there is no better time to be involved in government especially at the local level. By having access to the Internet, I don't remember this when I was younger whatsoever, even having a remote interest in government. Because you just felt so far removed from it. But now with social media you're not removed from it. You just stand as tall as they do that you have a voice every individual has a voice. So you have more influence now than you've ever had before because of it. Obviously there are downsides to it as well but you as a citizen this is an exciting time to be a citizen because you have been given a tool that you never had access before."

O2: "So feeling over the traditional social media platforms Facebook, Twitter being some of them that just kind of opened up a lines of communication from citizens directly

through the Mayor. But other way i would say be the Notify-me module on our website. That allows people to be notified about City events, causes and departments activity. So anything City wide, for anyone of our departments whenever there are updates or something new to announce, the people that are subscribe to that notify-me category are automatically notified of what's going on. So that helps with the engagements with citizens in different programs and different events.”

Q15a:

D1: I mean yes, obviously income levels have an effect on the use of technology which impacts are moves to eat government how do we remain in touch with those people that the economy may be leaving behind.

D2: I wouldn't say any issue, language can be an issues at time, we do have a translation services available. And an on site Spanish speaker and writer here within the staff. They are striving to represent all of buffalo and little by little they are tackling some of the small issues like language barriers and accessibility.

D3: Same answer for question 15.

O1: Same response to question 15

O2: “I think that those are big issues because you know obviously if your internet access is limited then even with the notify-me modular that we just talked about. You know if you don't have a cell phone with a data plan or any access to Wi-Fi internet then there's no way for you to get notifications even if you do subscribe. I think that the more access you have, the more engaged you're able to be so I think again that's the importance of kinda leveling the playing field as far as access goes, to other digital interfaces so people are comfortable doing digital in a different way.”

Q16:

D1: “I think, the culture I've set up surrounding the open data program has kind of helped Nudge the Departments, to think outside the box. To think what are we not doing, that other cities may be doing. How can we provide more value to the community than we are right now, and I think we're starting to see some shifts and culture around here and I'm excited about the years to come. I mean we are just at the start of year one of Open Data so I'm excited to see what years 2, 3, and 4 have and how excited people get about releasing the data and making more useful and accessible.”

D2: “I think it helps because we have a very diverse group here in our office and I want to say younger, shall I say not saying they're all teenagers, more less a younger staff which you know is more tech-savvy knows the power and everything and getting that information out as far. I mean social media alone I mean can get a word out about something in an hour that you couldn't reach before in any kind of way you know. You want to be giving as much information out but you also want to be mindful of what your giving out, what's going to come back on it, and the liabilities you got to deal with.”

D3: "I don't think it's hindered I think it has helped us we have to be able to think outside the box and look Beyond where you going and what you doing. I think those are important things that you have to have a culture that allows you to do that I think it does. last year I wouldn't have been one of the top [REDACTED] within the city I mean within the United States. This wouldn't have happened if that climate didn't exist then named by [REDACTED]."

O1: "I'm lucky that I work for a mayor that embraces a strong diverse culture. Members within my own department don't embrace it, as much as they should. it's one of those things that you're going to fall behind, if you don't accept it quickly. because you're going to be talking about news that was already 20 minutes old. It is one of those things that you're going to fall behind. so it is one of those things in in the office or in any [REDACTED] job if you are not on social media. You need to find something else to do."

O2: "I think both, I think the culture. well in in city government the culture is quite frankly is very bureaucratic, Their a lot of checks and balances and approval processes, a lot of people that have to sign off on the different components that are being implemented. so sometimes that slows down the process. But also it helps to develop an e-government strategy because there are so many inputs from different departments. Not only different departments but even different levels of this department. We get input from everybody so that helps to shape but more well-rounded program whatever you're doing. so on one end it may hinder because of the amount of time it takes to another and it really allows us to shape of more inclusive program."

Q16A:

D1: "I try not to let hesitancy a reluctance change, or slow down my work. That's why we are where we are now, you know, I think you'll get that in any organization. you just have to stay positive and work through it."

D2: "I would say the only way I could possibly be an issue is dealing with some of the shall I say staff member that have been here for a while. getting them, you know 'old school' quote on quote, you know and trying to explain to them the importance but it's coming I mean everybody is pretty much realize the importance in the need for having it."

D3: "I think changing business processes and talking to department heads about delivering things different is better sometimes you have different department who feel like they know it all or whatever. Having that leadership or having the ability to talk to people and they say there's a different way that we need to deliver it. Iit took some risk it took some it was challenging but now everybody's really bought into it. You know so I don't necessarily think I have resistance for instance: maybe for that one, 30 and 40 year old veteran who doesn't know how to turn on the computer is used to doing it a certain way with paper and pencil and that's the way of doing it. I'm not I'm never going to convince him to get on a computer. and maybe get his information and be able to create a process for it you know they say people process and technology in terms of that you

know what we're going to be able to do you need people you need processes Technologies is very important.”

O1: “It hasn't, again my role has been to shepard social media, so when everyone else is not thinking about it. it doesn't matter because I am, and i'm the reason that it will go. Like me, **Jamile Callen**, all of us working on social media we know... So its internal conflicts it's not political issues, again if you, it's almost generational. If you do not adapt to the change that's happening with the times which is digital, you are going to fall behind. That's the way it's going, so while there maybe resistance its my job i don't care about that resistance, my job is to do what i have to do to get the message out, and if the dinosaur is in the way the dinosaur will get mauled over. Because at the end of the day it doesn't matter what resistance is saying, the main person who is the mayor has the final say. He is already aware that social media is a priority to him.”

O2: “I've been fortunate with this department in this group of people in this leadership that there's not much resistance to change. but a lot of with this department does is it acts as a liaison between the other departments and the digital strategy. I see more resistance to change when reaching out to other departments. internal conflicts same thing we've been fortunate enough to have a department that has its share of internal conflict but it does not impact the workload. Political influence influence I think that remains to be seen. like with this whole thing is going on with net-neutrality and that brings up access issues as well do not one of the big guys on the internet and able to spend a ton of money on net-neutrality and if you just one of those smaller players then you might be less accessible to Citizens one way or another. so I think on the federal level it remains to be seen, but on the local level like this City government this **administration** has been so supportive that you know we really haven't had any limitations as far as that goes.”

Q17:

D1: “Monies were made available to procure the portal and without those monies we wouldn't have an open data portal.” There's no Financial constraints that are slowing down the open data work I would say if I had more money I could use it. We're just in the implementation phase one and in years two, three, and four, we might Procure more software products that can further enhance the use of our data.”

D2: “Obviously it's going to be a relatively large factor, I mean unfortunately everything comes down to how much money it cost, how much benefits, how much gain there's going to be from getting those funding. One if you can get the funding to begin with, then too implement it, its not only about implementing but their is also upgrading and managing these systems, its not a one-time thing.”

D3: “tremendous role of leadership but you also have to make the financial investment make sure you have the infrastructure to deliver or to facilitate e-government you know whether be the technology or equipment or software all that you have to have some Financial Resources to make that investment and sometimes it was recurring cost sometimes it's about developing app or something like that that has a cost it is not free.”

O1: “money as that will always be an issue because money means equipment and it means this or that. We're able to do our work but it would be nicer to have better equipment to do it on.”

O2: “A huge role, is would with anything, you know if there was just an endless pit of money than you could always just you know, fix mistakes just buying a new product. But because we don't have unlimited funds we have to be very careful and deliberate in our planning. To make sure the money is allocated and it is going to be spent in the best way. Also our record keeping in looking back at what worked and what didn't, that helps us make better decisions in the future and money so similar to what you would see in the private sector, in the public sector you're saving money coming in under budget is a huge component of it also.”

Q18:

D1: “My department's unique in that [REDACTED] managing the [REDACTED] program and there's no one else in it, but in terms of technical expertise we've had a great partnership and interaction with Management Information Systems Department here and a technical lead was appointed, who's been doing the technical back end work within the department.”

D2: “It definitely helps, we use a lot of researching and reaching out to different departments, there are some resources we have in the IT department that know a good amount, but there is not a huge pool of resources. So we basically utilize reaching out to user groups. For example [REDACTED] user groups, type of things, from all around the country, finding out best practices you know. Peer to peer is huge, and that's why everybody in this business, we aren't competing with Pittsburgh, as far as this part of it goes, we aren't competing with Boston or New York and any place else, but were all in the same type of business so we share our information and ideas of things that are working, things that didn't work.”

D3: “Some, you know, talking to businesses and talking to university and relying on experts with the technology. I'm not an expert in that and I know what I know, so it's a partnership along the way. Those technology gurus not listening to me or the community they are going to build something and nobody is going to use it. You have to have a good collaboration and cohabitate.”

O1: I am not a social media expert. So there are times where you feel like, ‘wow I really wish I knew a better strategy to do this, I really wish there was some other way or is there way.’ When someone will ask, can you just do this to get likes? I don't know can I? But you can always use more resources or more knowledge for anything and if you don't, if you're not open to it then you're an idiot. You always should be able to look at things and say, I mean the joy of the electronic era is that it was all fueled by like quick ideas and these ideas were grown and grown and grown because other people were able to adapt to make them better. You want to sort of incorporate that mindset for anything. like I never think that I have the best idea but if what I have works, that's fine. If someone else can

come along and say no, why don't you do this? Lets see what that does? And it makes something better you should be open to that."

O2: "I would say that the technical expertise are widely available, but the most technical expertise we actually get is from the IT department (MIS), which has been a huge resource for myself and others in this department. If there is something we don't understand or if there is something that needs to be built, and we don't have the capacity or know how to do, certainly MIS will be able to jump in and help us out."

Q18a:

D1: "I have some technical expertise but the real life high-level coder programmer, type people have to rely on external departments for that."

D2: "Unfortunately, everyone seems to come to me and I'm not saying im the most 'tech savvy guy' but whenever there is an issue people are always at my door. I can resolve some of the stuff but If I can't resolve it, i'll contact IT or MIS and have them take a look at it. Sometimes, they may even have to go and fix it, you know, but there's certain times, depending on the issue, if it's a Cisco issue or something like that, they may have to reach out to someone as well."

D3: "We are supported by another department which is the MIS department, so that's an important thing. We have good support from that department because it takes a lot of technology to run the different business processes we have here."

O1: "I mean again like we don't, there's no real technical thing to Facebook I feel like if you've made yourself a Facebook page like 20 years ago. I probably think that's better question for Chad for his part of it, because of the websites is very different thing and it feels like we used contractors to do things like obviously with the redesign of the website, and things of that nature. For like social media for that, my aspect of it is no, not really.

O2: when talking about department to department I would say it's source internally, it's not like we bring a third party consultant. It's all within the City but it's not necessary in the communications department."

Q19:

D1: "Yeah it's just me, I think it helps that it was me, because I do have some background in data and data analysis. My Americorps Vista is a young, technologically savvy person and having people like that on staff make the work of providing e-government services easier and if we had to rely on people I didn't have those skills. We'd still be. We wouldn't have an open data program."

D2: "Once again, I think we're in the benefit of having a younger staff, diverse staff sometimes has its challenges and rewards. as far as that goes well kind of talking about the other issue regarding age, culture your social background or economical background."

D3: "Very important because if you don't have the right staff or the skill staff you know to what you're doing is going to affect that, you know. So you don't want to scale up so fast we have so many experts. But that's still an important thing you have to have the

right people to do things that you have been able to do, have to buy into it but you have to have some skilled people to do.”

O1: “I mean I feel like, in a way. they've already done that and it's worked. The social media presence before I got here and as I was here it's changed drastically. He is an established person on social media he was on it before but it was very, like just a picture and it was the same picture standing on a podium. You could put almost all the pictures by each other and not know what happened for five years. Where now it's, oh there are other people, because it's not just him it's other members of the community. In a way, t's it's definitely changed because they have decided that it was a priority and obviously adding resources to it such as me and Colleen and Aileen, Jami like we all work together to keep that going so it is already happened.”

O2: “I think there's certainly just access to people, I think it all comes down to training. A lot of the e-government tools that are available are pretty easy to use. They make these things pretty user-friendly. So a person's ability or capacity to perform a digital task, the problem is having more of a leadership, and putting a system in place where people could be trained and learn and used what they learned productively. It's more of a training thing rather than when we need codders, because the technologies we have out there are very user friendly.”

Q19a:

D1: “So, I kind of showed my Americorp vista the basics of the open data portal, in the functionality and the data visualization tools. So, there was some training. Also, a larger open data committee I've trained on the use of “Trello” a project management app, that way I can organize all the work that we're doing and without that the project would be very scattered. It provides order, so I touch many different departments with the open data stuff. Having that digital tool how to create clarity about responsibilities and tasks.”

D2: “No”

D3: “We do, we provide training for staff, you know, in house-training in terms of information that's coming in and training is two ways, so we provide information but it's important that they provided us feedback”

O1: “No, I wish.”

O2: “So, again, the Communications department does not provide any training, but MIS provides general workshops that are open to anybody in the building. To be able to use microsoft office suite, excel or outlook, that certainly helps us become more efficient in what we do. They do a lot trainings and it's free and available for all employees.”

Q20:

D1: “I put it at a seven, we're in the space but we're just starting out and we got plenty of room to grow, and I fully expect us to grow and get there and catch up to those cities that have been doing open data for 5 to 7 years. I think our launch was very successful and I think it's going to propell us.”

D2: “I believe our e-government system is decent, I would rate it to be a five/ten, there are much more things we can expand on.”

D3: "Eight/ten, I think there will always be room for improvement and growth. I will never give us a 10 or 1. I think our ability to kind grow and create an environment so we can do that, so maybe an eight/ten."

O1: "I feel like we're at a solid seven. They're still not there, it can get there. It's on it's way there. We still have to move it to another level and I think we're heading in that direction, I think that we changed things we do do enough to keep it fresh but I feel like we definitely need more somehow."

O2: "I think that we are at a seven/ten. We have made significant strides over the past 18 months. So there's no real signs of slowing down. I think as more and more is implemented and goes on successfully, there's more and more opportunities to implement more, which I think we have been successful over the past 18 months, and a lot of things to be done, and I think the administration has been supporting us to expand on those things."

Q21:

D1: "We do have the relationship with the state's open data portal, we've been able to federate with them and that has made our open data portal much more robust than we have the right to be just at the start because we launched with 11 datasets about like 18 geospatial assets and the state portal has laid about 580 datasets and probably half as many geospatial assets. and all that is discoverable on our portal so that relationship with the state is excellent and that I fully expect that to pay off."

D2: "Inside City Hall is huge, obviously, a lot of times when people from different departments like the fire department, rental registry, different people put stuff out and they've gotten much better in bringing us in the loop beforehand, because they know we're kind of the point person where people are going to call, email, whatever the case maybe if they aren't sure about something. So, they try to share the information before it gets sent out. It used to be horrible, as far as giving communication, and we've gotten a great move forward on that. Is it a hundred percent yet, 'no' it does happen still sometimes, not nearly to the level it was. We do share, like, County Health Department, I'm in contact with them a couple times a week through emails different meetings, type of things."

D3: I think extremely important you know, you can't live within a vacuum. You have to kind of adapt to see what other municipalities are doing. I communicate with different cities about what's going on on what they're doing, if they're doing it, so that's an important part. I try to communicate with, like, cities, we deal with snow, so I try to communicate with people who deal with that. I have relations with people in New York City but to compare us to New York is as much difference in size. So, it's always important to have a network of other professionals who are doing what you're doing and we learn from each other. There's no pride in ownership, so it's very important.

O1: Other government, they don't impact us because it's the Mayor. However, I feel that collaborating with other government only, again, is part of the whole web and it can look stronger if everyone is standing together, like, Buffalo billion, when you're seeing the governor with the mayor with every big state, federal lawmakers, you see all them you know something big is going on. I feel like then, if that adds weight to it just by having the governor involved in something, it adds weight to something having the president, even if you don't like him, show up to something, it adds weight to that. When you have

partners in government working together on something on social media it should have the same effect, should have weight to it.”

O2: “I think it is vastly important because, you know, we see ourselves as different entities like city government, state government County government, but a lot of times for The Citizen, it's just government. For us being able to work together and kind of have seamless processes. Just goes to help the citizens because they're not really worried about if this is a county or city thing. They just know that they want the pothole cover or whatever the case is. Our ability to be of service to them and to work with our partners in government. The better than we do that the better we can services the citizens.”

Q21a:

D1: “I think the the state's willingness to partner with us was a big factor, it was a pretty easy lift, technologically speaking, this is kind of like a flip and switch. Yes, we want to federate with the city, eventually will federate back with the state portal, so that it, we will be discoverable on their portal as well. But, there weren't too many factors it was pretty much their **open data** manager saying yes, and I said yes and it happened.”

D2: “A couple of things like not duplicating Services, which I think is huge. Especially, the county and us, there's a big lead paint thing going on now where the city is huge on it, and getting ahead of everything. but there's a great collaboration with the county we're working together as partners and, not like I say duplicating services, more than anything else.”

D3: “I think having good leadership, I think I'm creating a climate so that innovation happens. Listening to the people that you're serving, you know, making sure that you're keeping abreast of technology, right? The whole idea of people processes and technology is important, as an important, because people have run it, they have to developed the process that, if you don't have the right technology to do all of that stuff that's an important key.”

O1: “I guess it would mean that they have to have a partnership in person. “E” anything is supposed to be an appendage to what's existing, to something that's already happening, so there's already no synergy between the two lawmakers in real life, there should be there probably is no synergy in the “e” world, you know what I'm saying? So, like, anything that constituents can pick up on that funny business too. For example, you see them at one thing once every 4 months or something there at something together again it's not that big of a deal, but if they are constantly doing things together like ‘oh wow they're opening this and they're like laughing and having a good time there working with these kids and they're doing that,’ you realize all these people not only genuinely with each other, but they do like who they're representing and like working together to bring out the best in who they represent.”

O2: “I would say technology is certainly a factor, going back to the forms example, if we are all on digital forms and the counties are all on digital forms, but the state has just paper forms. Some of our forms have to get submitted to the state, like for liquor board and things like that, so that would put an obstacle in the way of that work for us if we couldn't get the digital form to the liquor board. So I think everybody being on generally the same level as far as their digital capabilities is helpful to collaborate.”