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Third stage E-government and county employees: A case study of the Clark County Business License Department

Benjamin B. Bond III
University of Nevada, Las Vegas

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Third Stage E-Government and County Employees:
A Case Study of the Clark County Business License Department

by

Benjamin B. Bond III
Bachelor of Science, Political Science
University of Utah
1998

A professional paper submitted in partial fulfillment
of the requirements for the Masters of Public Administration

Department of Public Administration
Greenspun College of Urban Affairs
University of Nevada, Las Vegas

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ABSTRACT

Third Stage E-Government and County Employees: A Case Study of the Clark County Business License Department

by

Benjamin B. Bond III

Dr. Karen Layne, Committee Chair
Professor of Public Administration
University of Nevada, Las Vegas

This study presents the results of research designed to evaluate attitudes of county-level employees who are working within government departments that have undertaken electronic government (e-government) initiatives. Specifically, the guiding question addressed throughout this study has been: “How do county employees perceive third stage e-government initiatives?” Additionally, this paper will examine multiple factors that have been identified as key components of slowing the implementation process such as: resistance to technology, insufficient participation of employees in e-government development initiatives and management/ employee interaction in regard to e-government implementation. This paper is based on research gathered using a self-administered survey of thirty questions distributed to employees of the Clark County Business License Department. Factor analysis was employed to examine differing patterns of correlation within survey variable results to determine what, if any, factors exist. Factors that became most evident upon examination were employees’ years of education and what their capacity of work was in the department. These factors

were then cross-tabulated with responses to survey variables in an attempt to better interpret patterns of responses. The results of the research indicate an opposing view toward the majority of published literature dealing with the resistance information of technology. This study also examines the components identified as slowing e-government implementation against these two factors.

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I owe my family in a rather large way. They have managed to aid me through this process both emotionally and physically. Thank you for supporting me through this venture.

To my ever supportive wife, I can never repay you for making sure that everything else in our life did not get forgotten or left undone, not only these past few months but always. You have made this process less tumultuous than it may have been. I will spend a life-time making it up to you.

TABLE OF CONTENTS:

ABSTRACT.....i

ACKNOWLEDGEMENTS.....iii

CHAPTER I- INTRODUCTION.....1

 1.1 Brief Overview.....1

 1.2 Purpose of Study.....3

 1.3 What is E-Government?3

 1.4 Need for this Research.....5

 1.5 Clark County and Business License Department.....5

CHAPTER II- REVIEW OF LITERATURE.....10

 2.1 E-Government Evolution.....10

 2.2 Stage One Development.....11

 2.3 Stage Two Development.....11

 2.4 Stage Three Development.....12

 2.5 Stage Four Development.....14

 2.6 The Dilemma: Technology in the Workplace.....15

 2.7 Resistance to Technology by Employees.....15

 2.8 “Buy-in”19

 2.9 Third Stage Development and the Employee.....20

CHAPTER III- METHODOLOGY.....23

 3.1 Research Design.....23

 3.2 Survey Development.....24

 3.3 Survey Instrument.....25

 3.4 Response Rates.....25

 3.5 Analysis of Response.....26

 3.6 Limitations.....26

CHAPTER IV- FINDINGS AND ANALYSIS.....28

 4.1 Demographic Characteristics.....28

 4.2 Employees’ Attitudes Toward E-Government.....29

 4.3 Attitudes Toward Training.....33

 4.4 Employees Tasks and the Third Stage.....36

 4.5 Employees Participation in Developing Stage Three..... 39

CHAPTER V- CONCLUSIONS.....44

APPENDIX A- COVER LETTER.....49

APPENDIX B- SURVEY INSTRUMENT.....51

TABLE OF CONTENTS:

APPENDIX C- SURVEY INSTRUMENT RESULTS.....52

REFERENCES.....60

TABLES:

Table 1 Employee Annual Income.....28
Table 2 Number of Years Employed by Clark County.....29
Table 3 Results of Question 16 Cross-tabulated with Number of Years
Employed by Clark County.....30
Table 4 Results of Question 18 Cross-tabulated with Years of Education...31
Table 5 Results of Question 30 Cross-tabulated with Capacity of Work...32
Table 6a Results of Question 8 Cross-tabulated with Years of Education...33
Table 6b Results of Question 8 Cross-tabulated with Capacity of Work.....34
Table 7a Results of Question 9 Cross-tabulated with Years of Education...34
Table 7b Results of Question 9 Cross-tabulated with Capacity of Work.....35
Table 8 Results of Question 23 Cross-tabulated with Capacity of Work...39
Table 9 Results of Question 7 Cross-tabulated with Capacity of Work.....42
Table 10 Results of Question 21 Cross-tabulated with Capacity of Work...43

FIGURES:

Figure 1 Licenses Approved and Issued FY 1992- FY 2002.....7
Figure 2 Business License Full-Time Employee (FTE) per Fiscal Year.....7
Figure 3 Approved and Issued Licenses versus Increased FTE.....8
Figure 4 Did CLIPS Change Your Job?.....38
Figure 5 How Involved Were You?.....40
Figure 6 Did They Request Input?.....40

CHAPTER I – INTRODUCTION

1.1 Brief Overview

Historically, few strategies, new initiatives or technological advances have matched the Internet's potential to radically alter delivery of government services. Three key catalysts have been identified in the rapid evolution of e-government: the business sector, the public and government itself. Initially, the business sector drove the "dot.com" boom during the 1990s purely for the economic benefit of corporations. Dot.com companies introduced the public to the notion of logging onto the Internet, conducting a search for a wanted/needed good or service and paying for it, ultimately creating the "fully executable" transaction. There has been a dramatic increase of Internet users completing fully executable transactions online.

The National Telecommunications and Information Administration (NTIA) in cooperation with the Economic and Statistics Administration using the U.S. Census Bureau's September 2001 Current Population Survey, found that 54 percent of the population have access to the Internet. Of the 54 percent that has access, 39 percent of those individuals make purchases via the Internet (NTIA, 2002). Due to the vast quantities of individuals using the Internet to negotiate transactions in the private sector, the public's benchmark expectation for service delivery is higher than it was in the pre-dot.com era. Accordingly, the standard by which government agencies will be judged has been set by the private sector (Chidurala, *et. al.* 2001).

The "dot.com" revolution of the 1990s in the private sector has given way to the "dot.gov" revolution. Few similarities can be found between the dot.com era, which furnished explosive expansion of untested technology and unstable business practices,

and the dot.gov era, which has developed cautiously and methodically with the obligation to provide economically sound and technologically sustainable delivery of services.

What truly has made e-government possible is the rapid development of affordable technology, hardware and software, for both the provider and the end-user.

Government is not only obligated to meet the public's expectation for service delivery, but also to meet a higher standard of expectations than in the private sector. The Hart-Teeter study for the Council of Excellence in Government, found 36 percent of surveyed citizens believe that additional benefits of increased technology will be greater accountability to citizens, increased public access to government and more efficient/ cost-effective government (Hart-Teeter, 2002).

Government officials anticipate the benefits of e-government to include reduced operational costs of governmental institutions and regulated entities and increased convenience due to round-the-clock availability to government services. "In doing so, it should emulate, where possible, the commercial trend toward integration of services to improve usability for customers. This means, for example, that government should continue the transition from program- or agency-centered service offerings to user-centered services, which can imply aggregating services from multiple government agencies" (Nation Research Council, 2002, p. 8).

Aside from substantially reducing per transaction costs to taxpayers, e-government allows unprecedented accessibility to the functions of government. Many government officials and researchers like Fountain believe that e-government will lead to the concept of the "virtual state," that is, a governmental entity organized with "virtual agencies, cross-agency and public private networks whose structure and capacity depend

on the Internet and web” (2001, p. 4). In theory, e-government has limitless abilities to serve enormous quantities of customers at minimal cost.

1.2 Purpose of Study

This study is designed to gauge attitudes of individual employees of a local government department that is looking toward developing third stage e-government implementation (to be discussed later). Proposed research questions being asked include:

1. Is there an inherent resistance to technology associated with the introduction of new e-government initiative?
2. What effect does leadership’s “buy-in” have on front-line employees?
3. Does employee involvement during development stages reduce resistance to e-government initiatives?
4. Can employees’ demographic information serve as an indicator of resistance to e-government initiatives entering stage three?

1.3 What is E-Government?

“Broadly defined, e-government includes the use of all information and communication technologies, from fax machines to wireless Palm Pilots, to facilitate the daily administration of government. However, like e-commerce, the popular interpretation of e-government is one that defines it exclusively as an Internet driven activity... to which it may be added “that improves citizen access to government information, services and expertise to ensure citizen participation in, and satisfaction with the government process... it is a permanent commitment by government to improving the relationship between the private citizen and the public sector through enhanced, cost-effective and efficient delivery of services, information and knowledge. It is the practical realization of the best that government has to offer.” (UN and ASPA, 2001, p. 1).

Although there is no universally accepted definition of e-government, the aforementioned definition provided by the United Nations (UN) and American Society for Public Administration (ASPA) sets a benchmark of deliverance that government strives to obtain. According to Carmine Scavo and Yuhang Shi (1999), the arrival of the Internet and the World Wide Web (WWW or Web) marked a “watershed” in information technology usage by shifting the focus of governance to its external relationship with citizens. Information Technology (IT) has contributed to dramatic changes in politics (Nye, 1999; Norris, 1999), government institutions (Fountain, 2001), and red tape reduction (Moon and Bretschneider, 2002). Additionally, the definition provided by the UN and ASPA covers a vast range of qualifications that make up the term “electronic government.”

Using the words of President George W Bush’s Management Agenda will aid in focusing the topic of this paper: “e-government is not about putting thousands of government forms or reams of information online. Rather, it is about government making better use of technology to better serve citizens and improve government efficiency, cutting government’s time to make a decision from weeks or months to hours or days”^(2001, p. 1). Following these guidelines, this paper will only consider government departments that offer fully executable transactions.

According to a 2002 survey conducted by researchers at Brown University’s Taubman Center for Public Policy, a full quarter of all state and federal agencies offer fully executable transactions online. The term fully executable describes the ability to provide services that can be initiated, transmitted and paid for via the Internet. The emergence of fully executable transactions in the government sector did not follow the

same path as the private sector. Several models have been proposed to plot the development of e-government using stages. Four of the most note worthy individuals working in the field are Karen Layne, Jungwoo Lee, Janine Hiller and Dr. France Bélanger, all of whom have published articles outlining the four or five stages observed during e-government development.

1.4 Need for Study

To date, the vast majority of the information pertaining to e-government initiatives focuses on ranking of sites, available transactions and development issues. While compiling the literature upon which I base this paper, little mention was made regarding the crucial interaction between government front-line employees and the technology they work with, specifically e-government initiatives entering third stage development. To my knowledge, no formal study has been conducted focusing on front-line employees' attitudes toward e-government, nor has any researcher conducted any study of municipal level employees working toward third stage e-government. The intent of this study is to cast light on issues facing employees, such as attitudes toward e-government, its implementation and toward its development. It is my hope to contribute research and expand dialogue among those in a decision making capacity in government.

1.5 Clark County and Business License Department

According to Stacy Welling of the Public Communications Office, of the 41 offices and departments that make-up Clark County government; three have taken steps toward offering fully executable transactions (telephone conversation, March 21, 2003). The county's Court Education Office offers Internet Traffic School that is fully executable. The Recorder's Office offers a service that allows couples whom have

previously registered for their marriage license to order copies of said license. The third department that is close to offering a fully executable function is the Business License Department.

On a national scale, offering business licenses services via the Internet is very rare. The International City/County Management Association surveyed 4,123 county/municipality administrators on a diverse range of electronic government questions (2002). The survey revealed that just under 10 percent of respondents offered completion and submission of permit application for business license activities while 75 percent had plans to do so in the future.

On February 4, 2002, the Business License Department rolled-out its new Web-based computer program entitled Comprehensive License Information Processing System (CLIPS). Department leadership was asked by county information technology (IT) staff, and given an allocation of funds, to remove all departmental functions from the mainframe system that it employed. Consequently, the department undertook the process of developing an entirely new system that would ease the increased service demand placed on the department because of its inability to secure new staffing positions due to the countywide hiring freeze (Clark County Business License Department 2003). In a somewhat contradictory stance to the department's written statements, Figure 1 (produced using information released by the Business License Department,) provides a ten-year history of the number of business licenses issued by the department, including changes to licenses that required fees to be paid. Closer examination of this table indicates that although employees may have felt as increased demand for services, the actual percent increase of issued licenses from 1992 to 2002 was less than 9 percent.

Although we see an increase of issued business licenses, it would be unreasonable to label a 9 percent increase, over 10 years, in workload as substantial.

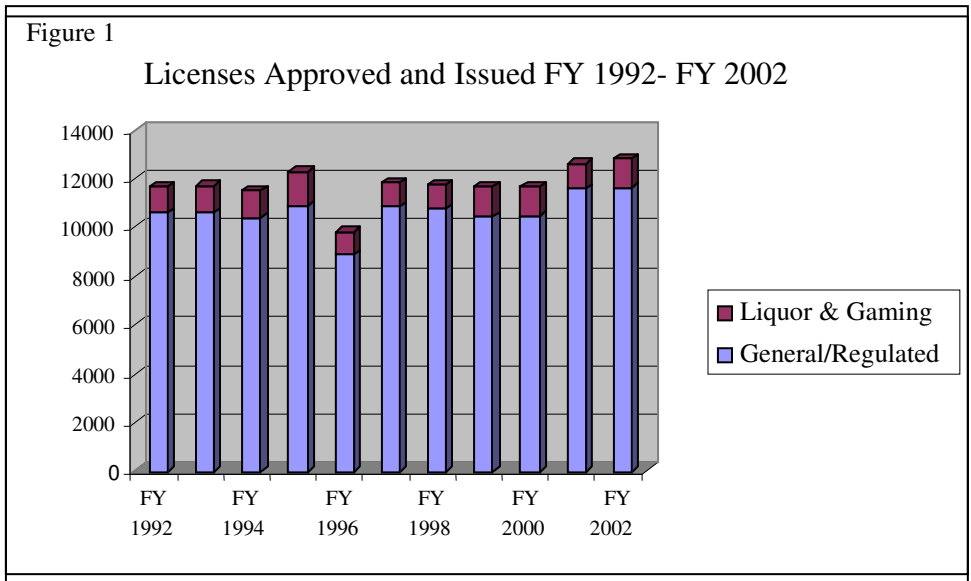


Figure 2 (produced using information released by the Business License Department,) provides a nine-year history (1994- 2003), of full-time employees working in the department. The information provided indicates that 14 additional full-time employees were hired by the department, which equates to a staffing increase of 14 percent over a nine-year period.

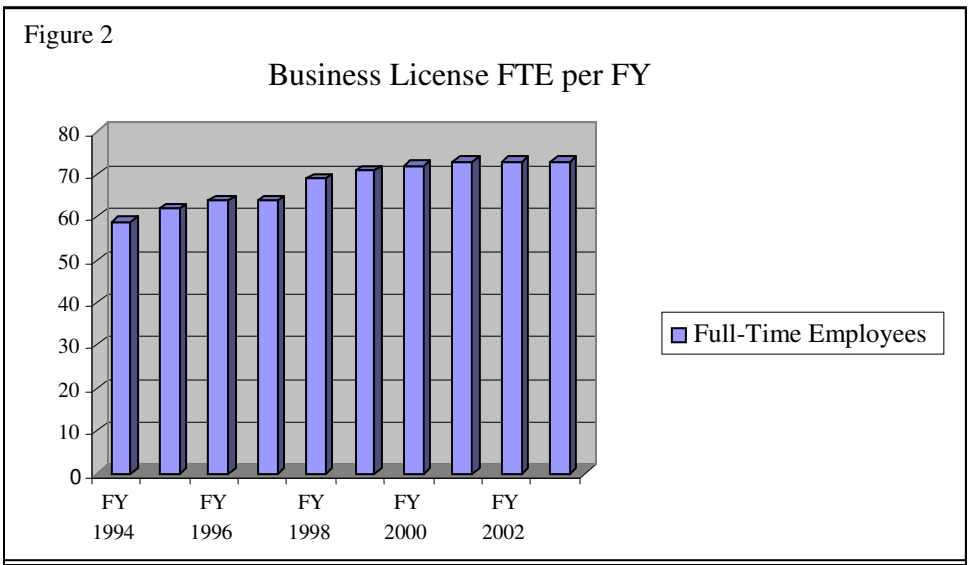
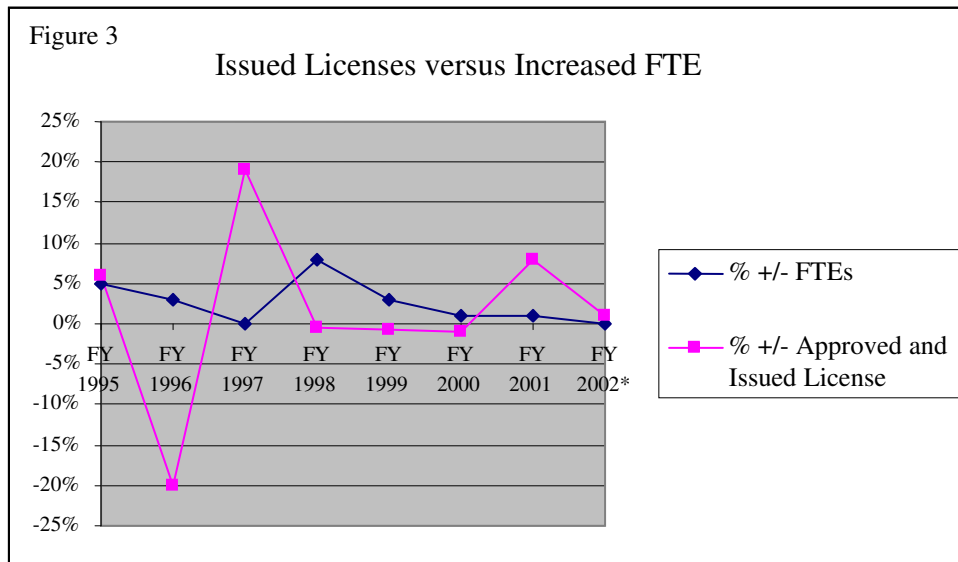


Figure 3 (produced using information released by the Business License Department,) compares the percentages of approved and issued business licenses to the percentage increase of full-time employees of the Business License Department. Analysis of figure 3 brings attention to the notion that, although there may be a need for increased delivery service levels to the public, justification for CLIPS can not lie solely on the argument of increased workloads. Although Figure 3 implies that CLIPS may not have been necessary based purely on workloads, the counterargument is that technology advances are continually necessary.



CLIPS is a highly ambitious process. Once CLIPS was approved by the department decision makers the key objectives of the system were to improve operational efficiency and effectiveness of the department (Nakata, 2002). The system was envisioned to do two things; first and foremost, replace an aging piecemeal mainframe operating system, and, secondly, to allow any individual with Internet capabilities to input information into the program, pay associated fees and generate a license all without setting foot in the Clark County Government Center. The operational platform was

designed to support business processes for six distinct divisions: administration, licensing, investigation, finance, audit and information management.

CLIPS was designed to rollout in two phases (Clark County Business License Department, 2003). The first phase rolled-out on February 4, 2002. This phase was intended to be a test period in which department employees and walk-in customers could use CLIPS via the department's Intranet just as if it were offered to the general public via the Internet. Phase two, scheduled to be operational on July 1, 2003, is CLIPS' introduction to the public via the Internet. July 1, 2003 will mark the Business License Department's complete entrance into stage two e-government.

With the Business License Department's entrance into stage two e-government, it will not take much technological effort to reach stage three. It would be prudent to focus attention on issues such as, possible ways to overcome obstacles to implementation concerning government organizations entering stage three e-government.

Chapter II of this paper will review existing literature of topics and concepts explored as possible explanations for the observed results of conducted research presented in Chapter IV. Chapter III outlines the methods followed during construction, distribution/ collection and analysis of the survey instrument. Results, including graphs and tables of this paper research, are presented in Chapter IV. Final analyses, conclusions and suggestions for further research are presented in Chapter V.

CHAPTER II - LITERATURE REVIEW

Chapter II will provide a review of published literature on stages of e-government evolution and the resistance of municipal government employees to information technology in the workplace.

2.1 E-Government Evolution

Optimistically, the Taubman Center for Public Policy at Brown University reported that 46 percent of federal agencies offer some variation of e-government services while all but one state has been found to have some form of e-government (West, 2002). The study and subsequent ranking of websites presented was completed by Darrel West. Although West's study and rankings offer an excellent starting point when considering e-government, it is important to remember that his state rankings are based on the entire spectrum comprising government's presence on the Web.

Consider the full spectrum of e-government observed today. It spans from basic web pages, which simply provide contact information, to more advanced websites providing users the ability to complete a service on-line. West's rankings can easily mislead readers because they make no distinction between elemental websites and those sites that are several evolutionary steps closer to offering fully executable transactions. Another, more accurate, measure for critiquing websites is to measure the functionality of the site. This characteristic is easily observable at the most basic of levels, such as the site serving as a reference providing easily displayable information. More advanced functionality may entail providing downloadable forms while an even higher level is indicative of providing complete services on-line. These differing levels have been broken down into stages by several researchers.

2.2 Stage One Development

In their article entitled “Developing Fully Functional E-government: A Four Stage Model,” Layne and Lee describe the evolution of e-government as occurring in a four stage growth model (2001, p. 123). Each of these stages, as defined by Layne and Lee, are identifiable due to varying levels of technology integration, website functionality and interdepartmental cooperation. This section will attempt to define the employee as an additional factor to be considered existing within the model set forth by Layne and Lee.

According to Layne and Lee, the first stage of e-government evolution is “cataloguing” (2001). This stage of implementation is defined by government departments establishing an on-line presence, consisting of phone numbers, addresses, hours of operation and/or other non-interactive posting of information. As indicated by West (2002), this stage of evolution currently contains the majority of e-government on-line presence in the United States. Although no conclusive findings have been published regarding employees and government departments in stage one e-government, it may be concluded that stage one has little if any effect on the day-to-day operations of employees because this stage is characterized by the elemental posting of contact information, posting of downloadable forms and limited portal access to linked other sites. Customers needing to complete a transaction must interact with the government department in the traditional manner, e.g. walk-in, phone, postal mail or fax.

2.3 Stage Two Development

Stage two, as defined by Layne and Lee (2001), is characterized by citizens’ ability to complete a simple service on-line. The reality of stage two is that of individual departments acting independently to undertake the task of creating fully executable

websites that allow a customer to complete a transaction, from initiation to completion, as long as the desired outcome solely consists of services from that single department. For all intents, this is e-government: fully executable services available via the Internet.

Hiller and Bélanger (2001), in a somewhat opposing view of Layne and Lee, proposes five stages of e-government in their evolutionary model. It is at stage two of Layne and Lee's model that we observe a divergence of thought. Hiller and Bélanger's stage two consists of two-way communication between government and end-user and stage three "allows online service and financial transactions by completely replacing public servants with 'web-based self-services'" (Hiller & Bélanger 2001). Although Hiller and Bélanger interpret e-government development with an additional stage, both Layne and Lee and Hiller & Bélanger conclude that the continuing implementation of new information technology impacts the employee during these similar stages. It is at this stage that the implications of technology theoretically begin to weigh on employees; for example, changes to operational procedures caused by a new workflow or computer system. Introduction of a new computer system may eliminate procedural steps of the old technique which may consequently reduce daily work processes for an employee by two hours.

2.4 Stage Three Development

Stage three, as presented by Layne and Lee, incorporates vertical integration of governmental services. Vertical integration indicates that intergovernmental agencies (agencies performing similar tasks yet at varying levels of government) coordinate efforts in order to provide "one stop shopping" for customers. Stage three has also been coined the "transaction stage." Transactions in this stage generally remain "highly regularized

and create predictable outcomes (e.g., approving a license renewal, creating a receipt, acknowledging a bid)” (Seifert, 2002, p. 10). An example provided by Layne and Lee is that of a business license department that allows customers to enter any level of government (state, county or local) and proceed to enter all pertinent data, pay a single bill for all applicable fees and obtain all necessary licenses for every level of government in a single transaction. On the outset the entire transaction appears to be seamless to the customer, all the while databases and servers supporting the different vertical levels of government are interacting to complete the transaction through interdependence and yet retain enough independence to garner specific information.

According to Layne and Lee, stage three is the point in the evolution of e-government at which individual employees are impacted the greatest. “Once systems are integrated and automated, most transactions are automated, and government employees are now becoming more an overseer of the process than a simple task-oriented assembly worker” (Layne & Lee, 2001, p. 131). Employees who formerly worked with customers face to face, surface mail or the telephone will see a drop in the number of those type of interactions they complete. Initially, the introduction of fully executable e-government websites may have little implications on the amount of work a front-line employee completes. However, as people begin to complete transactions online, fewer customers will access services via traditional means, thereby cutting the number of face to face interactions. West claims that 49 percent of the nations 70 largest metropolitan areas websites offer fully executable transactions; again, West’s definition of fully executable are very liberal, for example requesting service or information (not actually obtaining service or information) and filing complaints (2003). West’s survey ranked Las Vegas as

number 59, down 31 spots from 2001. Interestingly, Las Vegas was a top 15 finalist in the Center for Digital Government's 2002 Best of the Web Contest (2003). This contract is an example of the inconsistency that mars this field of study. If held to a higher level of service, fewer government websites meet this paper's standard of fully executable transactions. With 2/3 of online Americans having visited a government website (The Council for Excellence in Government, 2000), it will not be long until a larger number of agencies begin to enter stage three development possibly making for a difficult transition period for the employee. Government leaders, if properly planning for the future, must realize as e-government expands it will be prudent to become familiar with recognized employee hindrances to accepting e-government measures such as resistance to technology, implementation and "buy-in."

2.5 Stage Four Development

Stage four development has been characterized by Layne and Lee as true "one stop shopping" (2001, p. 124) for citizens. It is integration of differing governmental departments and multiple services into an easy to use site allowing customers with various needs to be fulfilled in a single transaction. Again, the business license example, a customer need to apply for a license, not only can they have all licensing needs met but they will also have access to the state's, county and city's taxation departments, the clerk's office, the health department and the fire and building inspectors offices.

No government agencies are in this stage of development, yet. Although still years ahead of current technology and departmental cooperation, some decision makers do have the foresight for this level of development. For example, the Clark County Business License Department has been in the process of opening communication lines

with other departments via, Ad Hoc Cross Function Teams in hopes of creating cross-talking databases.

2.6 The Dilemma: Technology in the Workplace

The dilemma is as old as the workplace: “does new technology spawn resistance to it?” “There is nothing more difficult to arrange, more doubtful of success, and more dangerous to carry through, than to initiate a new order of things” (Machiavelli, 1513, p. 21). Throughout history, advances in technology have initially created short-term disturbances in workflow. Slowdowns in work output were observed in the early 1900s with the introduction of electricity and in the 1970s with the growth of computerization (David, 1991).

2.7 Resistance to Technology by Employees

Due to the fact that little research can be found examining the results of interaction between employee initiatives and e-government, the following discussion will be based upon research that has been compiled on advances in technology and IT.

Early research into resistance to technology focused on general factors such as innate resistance to change, lack of involvement in the implementation process, lack of management support and poor technical quality (Henry, 1944). This line of research sought to change the end-user’s behavior by persuading them to abandon the “old way” of doing things, and adopt the “new way” (Hirschhiem and Newman, 1988). This is difficult to do since people tend to prefer the status quo over change. Research by Simon and Kern found that lowering anxiety levels felt by employees towards the new way can be accomplished by keeping as many of the familiar practices and norms as possible, all the while encouraging gradual technology integration (Simon & Kern, 2001). Retaining

familiar practices and norms will simultaneously accomplish that which benefits the organization and the employee. The challenge now is how to encourage individuals to accept new technology to meet the organization's goals.

Admittedly, the Computer Science and Telecommunications Board (CSTB) found while examining human-computer interfaces, people's abilities do not progress at the same rapid rate of basic computing capabilities (2002). Simply put, humans are the limiting factor of the equation. Several hypotheses can be put forward to explain CSTB's observed behavior. The most studied hypothesis was individual employees' resistance to technology. Resistance to technology at the individual level takes many forms, but is most commonly displayed in an employee's unwillingness to attempt to learn new technologies or evolve as quickly as the technology being introduced into an environment. An employee's resistance to technology may stem from several sources such as an emotional fear of being phased out, additional technostress associated with new technology, or lack of understanding long-term department goals. Certainly individuals trying to keep pace with technology can be a daunting task. Individuals may feel that it constitutes a great deal of learning, but realistically only those technological aspects which influence an individual's daily work experience would need to be taken on.

According to Helpman and Rangel (1999), individual learning in the work environment occur in two distinctive fashions: experience and education. Experience is what happens in the office while an employee receives "hands-on training." This type of learning has been found to be less transferable across the technology spectrum. Although this training is initially economically practical for a department and the employee, it does not pay long-term dividends. Hands-on training benefits the individual employee lacking basic knowledge that is so crucial in multitasking. Government employees facing third stage e-government initiatives may be anxious about the transition because, the initiative is based on new technology. Although employees may be adequately trained to complete their tasks on the outgoing system they may feel lost using the new technology without formal education.

Formal education provides a greater knowledge of basic skills that are applicable to a wider range of technologies. Education increases the set of technologies that a worker can operate, thereby supplying greater confidence when faced with a change of operating systems (Helpman & Rangel, 1999). Although,

there will be temporary drop in productivity, employees facing a technology change who have formal education will rebound more quickly and surpass previous levels of output. A quick recovery to previous production levels can reduce several of the factors that contribute to resistance to technology, such as reduced levels of technostress and increased job security.

Peters (1986, web citation) was spot on when he assured that in today's work environment "what gets measured gets done." Because of our reliance on quotas, it is important for employees in any sector, particularly those faced with the fear of being phased out, to return to high levels of production once an initiative has been rolled-out. Entering stage three e-government implementation, employees perceive the possibility of job loss as a reality; it is therefore imperative that employees return to an established output level. One of the quickest ways of doing so is continual formal education of technological advances to alleviate fears of being phased out.

Additional factors that influence resistance to technology are organizational structure and organizational culture. Simon and Kern (2001) define organizational structure as "the organizational architecture that supports business activities" (p. 61). Organizational structure refers to the hierarchy of the organization, its policy and procedures, the rewards systems or disciplinary systems and the work processes of an organization. Structure has to do with the way the organization is built, and how its basic employee-related functions work (Simon & Kern, 2001).

Productive methods of overcoming resistance in the arena of organizational structure involve slowly acclimating staff to changes prior to the introduction of new technology (West & Avgerou, 2000). The gradual introduction to altered or enhanced IT into the workplace provides employees with time to cope and adjust to the inevitable change in procedures and workflow. This factor contributing to technology resistance can easily be overcome with foresight and proper planning by department leadership working closely with the implementation team to acclimate front-line employees prior to launching new technology.

At the organizational level, a second factor to explore while attempting to explain resistance to technology is organizational culture. Formally defined, organizational culture is "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to

perceive, think and feel in relation to those problems” (Schein, 1993). Organizational culture is difficult to overcome because it is not the objective world of policy and procedure, chain of command, and work “in” and “out” boxes. Organizational culture is difficult to shape or change because it includes the common psyche of everyone in the organization, past and present. It is the cerebral world of individual interactions, groupthink and outside factors having influence on the organization. Management must have a clear understanding of the organization, by doing so they can make appropriate adjustments to overcome this factor.

2.8 “Buy-in”

A second postulation attempting to answer the question of resistance to technology and e-government is the notion of “buy-in” offered by management.

Government decision makers have opted to implement new technology to enhance core work function but inevitably every component of the organization will be forced to change (Corcoran, 2000). Service provision has shifted in a new age to “one in which information is becoming a primary resource, people must be knowledgeable, productive and motivated. The workforce needs to quickly acquire new skills to be flexible and responsive to changing demands” (Clarke & Lehaney, 1997, p. 131). Because employees are comfortable with the status quo and are, at best, skeptical of change, management must “sell” the notion of new technology as a choice benefiting stakeholders.

One of the most easily manipulated factors affecting successful IT acceptance by front-line employees is that of an enthusiastic organizational leadership. Studies have shown (to be examined later in this paper) that, due to the lack of departmental support from decision makers, technology implementation has failed at much higher rates. If management’s

ability to “sell” technology and its benefits are insufficient to meet or surpass the level of resistance by front-line employees, resistance will be encountered.

Research by Martinez, Meyers *et. al.* Cooper, Burbridge *et. al.* and Slevin *et. al.* have all

indicated that top management support of new technology is crucial to success of implementation (Kuruppuarachchi, 2002).

Technology brings with it changes in work content and processes. These changes are dynamic, not static (Miller & Cardy, 2000). Specifically with the introduction of third stage e-government into a department, leadership is faced with new work patterns and flows. Selling the benefits to employees is a critical step prior to implementing e-government initiatives. Management must push e-government as important and then drive accountability for it every day (Association for Federal Information Resources Management, 2002). Leadership must focus on the positive; yet David Haines (1999) concedes that management rarely has the desire to seize the opportunities for new organizational structures or the technical competence to absorb and control new flows of information. This is a failure of management to fully seize available opportunities to gain a foothold against resistance to technology. It makes little sense to invest vast amounts of time and resources into a new technology, yet fail to recognize its full potential because of a lack of management support.

2.9 Third Stage Development and the Employee

The notion of third stage e-government development and leadership's buy-in^{work} closely with the third hypothesis to be explored, employees' involvement in development. Employees often become confused with new technology. According to Henry (1994), more often than not, they are not included in the decision to transform to e-government. They may not feel that they have been properly trained to undertake their new duties or old duties using new tools. These feelings contribute to "psychological contract breach."

Psychological contract breach is negatively related to three forms of employee contributions: performance, citizenship behaviors and intentions to remain with the organization (Robinson, 1996). Employees who feel as if the organization has breached its contract will react in a negative fashion, feel isolated and more often than not take a significantly longer amount of time to “come around” regarding the new initiative. It would be wise for the organization to recognize early in the process that there will be negative repercussions felt by a large percentage of its workforce.

It has become clear that early involvement of front-line employees in development stages pays huge dividends during the rollout phase in counteracting psychological breach (Robinson, 1996). This process is most aptly summarized as: “this approach goes to the heart by focusing on a word- empowerment- that incorporates both the ‘giving’ of power and the “gaining” of it (Hardy & Leiba-O’Sullivan, 1998, p. 454). Empowerment acknowledges involvement of all participants, including management (Wood, 1998). The result is an emphasis not so much on what changes and what does not, but on the capacities of those involved for further change, reflecting some of the immanent quality of future change to which Orlikowski (1999, no page cited) alludes to with the notion of “emergent change”.

Departments that include all stakeholder in the development process increase the feeling of ownership by employees in the end-product. A feeling of ownership by employees who participated in the development process from inception to rollout increases immediate appeal of new technology; serving to lower resistance (Haines, 1999). A sense of ownership can be accomplished through participation of employees in development teams, round table discussions or testing groups.

Chapter II introduced the stages that researchers (Layne, Lee, Hiller and Bélanger) believe e-government has evolved from and will continue to evolve to. Specific attention was paid to stages two and three, setting the backdrop for results of this research. Additionally, several factors were introduced that have been identified as hindrances that government decision makers will likely face while transitioning into stage three e-government implementation.

Chapter III identifies the research design of this study. It also describes the steps involved in the survey development, as-well-as provides a detailed examination of the survey instrument. Timeframes and response rates of the survey instrument are provided

along with an explanation of the analysis of responses. Lastly, Chapter III explores limitations places in the survey.

CHAPTER III – METHODOLOGY

This chapter describes the research design and identifies the sample surveyed.

Development of the survey instrument and the survey instrument itself will be described.

Distribution and collection of the survey instrument will be addressed as well as response rates. Limitations of the study will also be outlined.

3.1 Research Design

Taking into account the large number of governmental departments opting to offer services via the Internet, it is clear that decision makers understand the benefits associated with e-government. Decision makers realize that e-government benefits every arena-- citizens, the business community and other governmental departments-- by providing ease of access, reduced red tape and cost effectiveness.

Surveys designed to measure citizens' attitudes (Hart-Teeter, 2002) have shown opinions favoring e-government are extremely high. But questions remain regarding opinions of governmental employees. How do employees perceive the evolution of e-government initiatives? Do government employees fear the encroachment of e-government implementation into their daily tasks, or do they eagerly anticipate benefits of e-government such as streamlined service and reduced red tape?

I could find only one section of the Hart-Teeter (2001) survey that attempted to address these or any other questions regarding attitudes of government employees regarding third stage e-government development. This study attempts to measure local government employees' attitudes toward the introduction of e-government into the workplace. Additionally, this study will attempt to highlight government employees'

attitudes regarding possible organizational changes that may occur due to the introduction of an e-government program into a local department.

Survey participants were Clark County Business License Department employees. The survey was designed specifically to be completed by individuals employed by the Business License Department. The surveyor's intention is to gauge attitudes of employees toward third stage e-government initiative. Seventy two self-administered surveys were hand delivered by Business License Department staff to individuals employed by the Business License Department on February 4, 2002; the date of CLIPS phase one rollout.

3.2 Survey Development

The survey used in this study was developed over a period of six weeks. In addition to meeting the experimentation requirements of the University of Nevada, Las Vegas¹ and Dr. Karen Layne of the Public Administration Department, the survey was subjected to the superfluous scrutiny of a third approval process levied by management of the Business License Department. Upon meeting the criteria set forth by the three aforementioned overseeing bodies, beta testing was conducted to test the validity of the survey questions. Beta testing consisted of two test groups, each composed of three Business License Department employees. After requested revisions were made to the survey instrument to reduce the "subjective nature" of the response scales, the final version of the survey was readied for distribution (Appendix B).

¹ Prior to distribution of any university-supported experimentation, students must obtain approval to do so. Obtaining approval entails five procedural steps including generation of: protocol cover form, description of study, informed consent, copy of survey instrument and assurance training certificate. All materials are returned to the Office of the Protection of Research Subjects for review and final approval prior to conducting any research.)

3.3 Survey Instrument

Affixed to each survey instrument was a cover letter (Appendix A) wherein I introduced myself as a graduate student intern working towards a degree through the Public Administration Department at the University of Nevada, Las Vegas. The cover letter gave a very brief overview of the intent of the CLIPS system (not e-government in general), my expectations of findings arising from the study, and detailed instructions for the completion and return of the self-administered survey.

Respondents were given a self-administered instrument composed of 30 questions, the majority of which were to be answered on a Likert scale of “a” meaning strongly agrees, to “e” meaning strongly disagrees. Offering respondents an ordinal scale from which to choose reduces subjectivity in interpreting responses (Trochim, 2002). The Likert scale was employed for this instrument because of ease of use-for-respondents and ease of use in analyzing responses. The fill-in-the-blank responses found in the demographic section of the survey required interval level measure.

The instrument was designed to measure attitudes concerning: 1) participation in the creation of CLIPS, 2) training on CLIPS, 3) functionality of CLIPS, 4) organizational culture post CLIPS implementation and to gather demographic information such as age, gender, education and income.

3.4 Response Rates

Seventy two surveys were distributed within the Business License Department on August 12, 2002, for all full time and part time employees, all of whom utilize CLIPS. Respondents had five days initially to return the completed survey to a central collection point within the department. A full calendar week after the initial distribution, I returned

to the department to collect all submitted surveys. Thirty six surveys (49 percent) were returned within the initial week time period. An e-mail reminder was sent on August 20, 2002 to all department employees indicating it was still possible to return any completed surveys. On August 27, 2002, I returned to the department to collect additional responses, of which there were six. The total response from the survey was 42 instruments equaling a response rate of 58 percent. Appendix C displays raw data gathered from the survey instruments.

3.5 Analysis of Responses

After collection of all the completed survey instruments, the raw data was entered into Microsoft Excel and SPSS programs for analysis. Excel was used to analyze individual variables as well as for graphing results for clarity and ease of use. Patterns of correlation were segregated in attempts to explain away differences within the data set. Survey results were also coded and recorded in SPSS. SPSS was employed for statistical analysis such as cross-tabulations of independent and dependent variables as well as for creating tables and graphs.

3.6 Limitations

While this study does have practical implications for the Clark County Business License Department, it does not accurately represent a significant sum of county employees. Clark County government consists of 41 departments, of which only three have taken on the challenges of e-government (Welling 2003). Hence, 42 county employees in no way constitutes a majority of county employees faced with conversion to an e-government initiative.

A second limitation of this study is the fact that the Business License Department has yet (as of March 2003) to provide fully executable transactions to the public via the Internet with the CLIPS initiative. Surveys were distributed and collected in August 2002 in anticipation of CLIPS reaching the department's timeline of being fully executable by July 1, 2003. At the time the surveys were administered, CLIPS was operational only via the Business License Department's Intranet. Meaning, the public's access to CLIPS is limited to "self-help" stations inside the county government center. This is not true stage two e-government, but this is not to say that the department could not easily move forward into the third stage of implementation.

Chapter IV provides specific findings of the survey. Presentation of sections corresponding to literature presented in Chapter II: resistance to technology, training, organizational and cultural change and development and implementation.

CHAPTER IV- FINDINGS AND ANALYSIS

Chapter IV presents and examines the results gathered from the survey instrument discussed in the previous chapter. The chapter begins with the presentation of demographic characteristics of the respondents. Respondent's attitudes toward e-government are examined as well as attitudes toward the department's training procedures pre / post CLIPS rollout. The last section of the chapter addresses employees' attitudes regarding involvement in the development of CLIPS.

4.1 Demographic Characteristics

Based on the responses of the survey instrument, what do the employees of the Business License Department look like? Women comprise 56 percent of the department's workforce. The average age of a Business License Department employee is 47. The average number of years of education is just under 17 with a standard deviation of just over 2 years. 33 percent of respondents indicated that their income level fell between the ranges of \$40,000 and \$59,999 per year, while just under 24 percent fell between \$20,000 and \$39,999 per year, just over 26 percent indicated earning over \$60,000 a year; 27 percent made no indication of income.

Table 1: Employee Annual Income

Annual Employee Income		
	n	%
a. (\$1- \$19,999)	3	7
b. (\$20,000- \$39,999)	10	24
c. (\$40,000- \$59,999)	14	33
d. (\$60,000 +)	11	26
Total	39	90

More than half of all respondents classified themselves as a "professional county employee". A professional county employee was, for this study, determined to be a

front-line employee whose main task is to interact with the customers of the Business License Department (e.g., Business License Technicians, Business License Auditors and Business License Field Agents). Just over 14 percent of the respondents indicated they worked in the position of “supervisory/ middle management.” It is worth noting that no employee categorizing themselves as “upper-level management” returned a completed survey instrument. This phenomenon may be explained away by the notion that the survey questions, although intended to be responded to by all employees, were written specifically for front-line employees. Upper-level management may not have found the questions suitable to their job level.

The respondents’ average length of employment with Clark County was slightly over 10 years and the average length of employment with the Business License Department was just under nine years. Respondents indicated that they have worked on average just over 10 years in their current position; this does not imply in the same department.

Table 2: Number of Years Employed by Clark County Cross-Tabulated with Position Held

		Position Held			Total
		Clerical	Professional Employee	Supervisor	
Number of Years Employed by Clark County		n	n	n	
	1-5 yrs	5	8	1	14
	6-10 yrs	3	3	4	10
	11-15 yrs	1	3	1	5
	16-20 yrs	1	2		3
	21 +	1	6		7
Total		11	22	6	39

4.2 Employee’s Attitudes Toward E-Government

Three questions on the survey addressed attitudes toward either e-government and technology or CLIPS itself. These three questions are important in establishing a link

between the employee faced with entering third stage e-government implementation and their attitudes toward that initiative. Question 16 asked, “organizational change occurs frequently with technology. Do you personally believe this concept?” Three quarters of respondents indicated that they do believe organizational change follows the introduction of technology. This question was used in the survey to gauge employee rigidity to the concept of change incurred by the introduction of new technology. Published information about resistance to e-government specific initiatives, finds that employees do not agree with the notion of change due to the introduction of technology (Simon & Kern, 2000, AFFIRM, 2002, Henry, 1994).

Table 3: Results of Question 16* Cross-tabulated with Number of Years Employed by Clark County

Years Working for County

Q 16	1-5 years		6-10 years		11-15 years		16-20 years		21 +		Total
	n	%	n	%	n	%	n	%	n	%	n
SA	7	58	2	17	2	17			1	8	12
A	6	33	4	22	2	11	2	11	4	22	18
N	1	14	4	57					2	29	7
D											
SD							1	100			1
Total	14	37	10	26	4	11	3	8	7	18	38

Significance= .80

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*“Organizational change occurs frequently with technology.” Do you personally, believe this concept?

The findings of this study contradict virtually every researcher in the area of resistance to technology and organizational structure because over 70 percent of all respondents agree to Question 16, while only 2 percent disagreed and just under 20 percent remained neutral. Only Lewis, author of “End-user’s Resistance to Technology and Change is Based on Experience, Not Instinct,” an article appearing in InfoWorld Magazine supports the results of Question 16 (2000, p. 1). “But it turns out that end-users like new technology and some forms of change,” Lewis bases this statement on the

premise that employees must benefit from the change and that management has kept them involved with its development.

Question 18 was specifically designed to measure employees’ response to the Business License Department’s e-government initiative. Approximately 58 percent of the respondents either “strongly agreed” or “agreed” with the question, “Do you feel it is important for Clark County to undertake electronic government initiatives?” 7 percent of respondents answered with a neutral response while almost 5 percent of respondents disagreed. This question was designed to measure the employees’ understanding of e-government’s emerging role in governance. This is an unexpected response because indications found in the literature (Henry, 1994, Clarke and Lehaney, 1997 and Simon and Kern, 2001) imply that employees feel that they face the possibility of being phased out by new technology. These survey results are in stark contrast to the overwhelming negative concept that researchers have of government employees.

Table 4: Results of Question 18*Cross-tabulated with Years of Education
Number of Years of Education

Q 18	High School		Some college/ Bachelors Degree		Post-graduate		Total
	n	%	n	%	n	%	n
SA			8	50	8	50	16
A	3	20	8	53	4	27	15
NR	2	67	1	33			3
D			1	100			1
SD			1	100			1
Total	5	14	19	53	12	33	36

Significance= .83

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Do you feel it is important for Clark County to undertake electronic government initiatives?

The third and final question focusing on attitudes was Question 30, which asked, “are you satisfied with CLIPS?” Approximately 57 percent of the respondents “agreed”

or “strongly agreed” with this question, while just over 26 percent indicated that they “disagree.” Just under seventeen percent were neutral in response, while no respondent indicated that they “strongly disagree.”

This straightforward question may, in actuality, be more difficult to analyze than originally intended. If taken at face value it may be concluded that the majority of respondents gave a positive approval response for CLIPS. If analyzed using cross-tabulation of responses by respondent’s work capacity, no supervisor responded with “strongly agrees,” indicative of Kurupparachchi’s *et. al.* number two factor for successful project implantation, top management support (2002).

Table 5: Results of Question 30* Cross-tabulated with Position Held

Q 30	Position Held						Total n
	Clerical		Professional Employee		Supervisor		
	n	%	n	%	n	%	
SA	1	20	4	80			5
A	6	30	11	55	3	15	20
N	2	50	1	25	1	25	4
D	2	20	6	60	2	20	10
SD							
Total	11	28	22	56	6	15	39

Significance= .99

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*In general, are you satisfied with CLIPS?

Again, almost every researcher writing on the topic of acceptance of information technology indicates that for successful implementation of e-government initiatives upper level management must overwhelmingly support the program. The fact that no supervisors “strongly agreed” with Question 30 correlates to what Lewis writes in his article, which again, agrees with the results of this survey. Lewis (2001) states, “the biggest change resistors reside in the executive suite. In general, they have the biggest stake in the status quo, have the least to gain, and have the most to lose when a company

changes,” which implies that management may not have fulfilled their managerial obligations of “selling” the initiative (p.1).

4.3 Attitudes Toward Training

Four questions included in the survey attempted to measure employees’ attitudes toward the training received prior to, or post CLIPS rollout. Question 8 asked employees if they had received enough training prior to CLIPS rollout. Results posted on tables 6a and 6b indicate an almost 50/50 split of respondents that agree and disagree to Question 6, with no significant shifts of opinion based on education or position held. I would have expected to find a more positive response from employees with higher levels of education and greater work capacities. Helpman and Rangel (1999), indicate that the greater ones education is, the less likely they will resist new technology, this is particularly evident when acquiring new skills.

Table 6a: Results of Question 8* Cross-tabulated with Years of Education

Q 8	Number of Years of Education						
	High School		Some college/ Bachelors Degree		Post-graduate		Total
	n	%	n	%	n	%	n
SA			1	25	3	75	4
A	2	29	4	57	1	14	7
N	1	10	5	50	4	40	10
D	2	20	4	40	4	40	10
SD	1	20	4	80			5
Total	6	16	18	51	12	32	36

Significance= .89

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Prior to implementation, did you receive enough training on/with CLIPS?

Table 6b: Results of Question 8* Cross-tabulated with Position Held

Q 8	Position Held						Total n
	Clerical		Professional Employee		Supervisor		
	n	%	n	%	n	%	
SA			4	100			4
A	2	25	4	50	2	25	8
N	4	36	6	55	1	9	11
D	5	46	4	36	2	18	11
SD			3	75	1	25	4
Total	11	28	21	54	6	15	38

Significance= .90

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Prior to implementation, did you receive enough training on/with CLIPS?

Question 9 followed Question 8 by asking employees, “of the initial training you received, was it sufficient?” Again, an almost even split was observed in the response rate between agree and disagree. While education and position held give no indication of a patterned response.

Table 7a: Results of Question 9* Cross-tabulated with Years of Education

Q 9	Number of Years of Education						Total n
	High School		Some college/ Bachelors Degree		Post-Graduate		
	n	%	n	%	n	%	
SA					3	100	3
A	3	27	6	55	2	18	11
N	1	11	3	33	5	56	9
D	2	22	5	56	2	22	9
SD			5	100			5
Total	6	16	19	51	12	32	37

Significance= .36

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Was the training sufficient?

Table 7b: Results of Question 9* Cross-tabulated with Position Held

Q 9	Position Held						Total
	Clerical		Professional Employee		Supervisor		
	n	%	n	%	n	%	
SA			3	100			3
A	4	36	5	46	2	18	11
N	1	11	6	67	2	22	9
D	6	50	5	42	1	8	12
SD			3	75	1	25	4
Total	11	28	22	56	6	15	39

Significance= .81

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Was the training sufficient?

Questions 10 and 11 attempted to gauge employees' attitudes toward training post CLIPS implementation. "Have you received training since implementation?" In line with Helpman and Rangel (1999) the question's response options were "yes, formal training," "yes, on the job training," "no, I have not" and "other." Making the distinction between formal training and on the job training is important for several reasons, namely as a gauge of the level of commitment to the employee from the department. "Experience, or on the job training, and education are two different types of capital. Both of them increase the productivity of the labor force, but they operate through different mechanisms. Education increases the set of technologies that a worker can operate, whereas experience increases the productivity of a worker using a given technology (Helpman and Rangel 1999, p. 360).

These results indicate employees perceive they did not receive enough formal training on CLIPS prior to its rollout. Interpretations of these results take different forms, the first of which is that for this department entering third stage implementation represented a technologically novel developmental step for employees. Is it possible that

decision makers may have believed that employees were already technologically savvy enough that minimal formal training would be necessary prior to CLIPS rollout? It may also be that decision makers, in an attempt to cut implementation costs, attempted to reduce costly man hours associated with formal training to focus on “crash course” training while employees were attempting to complete tasks. A third possible scenario to explain the observed results is the notion that employees themselves decided to forego formal training, opting for the quick fix of on-the-job training, or a combination of all three.

When asked if respondents had received enough training post implementation in Question 11, fewer than 47 percent replied favorably, 26 percent were neutral, while just over 19 percent still replied negatively. Interestingly, those respondents with a college education replied in the affirmative 5-to-1 for Question 11, implying that individuals with a higher level of education felt more comfortable with less formal training all the while more confident that they had enough training to successfully complete their job.

4.4 Employees, Tasks and the Third Stage

It should be understood that technology in the workplace creates organizational change both to culture, as described above, and to organizational structure.

Organizational structure can be used as a classification mechanism according to whether structures are bureaucratic-mechanistic, networked, functionalized, or divisionalized according to authority base and size (Morgan, 1997).

Eight questions on the survey were designed to measure several different components that make up organizational structure. Questions 12 and 14 dealt with the physical structure of the department post CLIPS rollout. Specifically, Question 14 asked

whether the need for staffing increased, had not changed, decreased, or other. The vast majority, 69 percent, of respondents indicated no change, while approximately 12 percent indicated the need for more staff increased. 33 percent of those employees working in a supervisory capacity indicating the need increased.

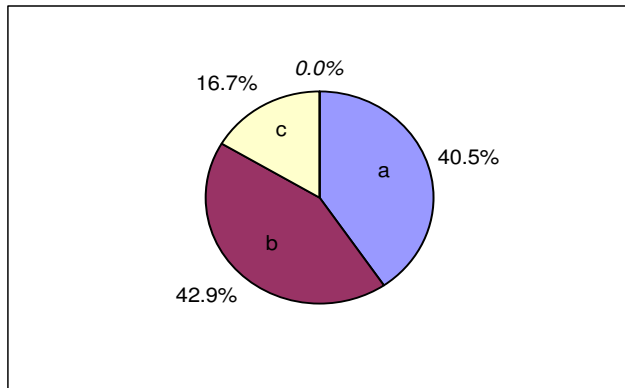
How can this be? After all, the evolution of e-government was based on a consumer centered model. Besides allowing customers round the clock access to government services, the technology is intended to reduce staffing, (not require more government employees,) or, at the very minimum, maintaining existing levels of staffing. Good news for government employees and bad news for the taxpayer? Hiller & Belanger (2001) believe that as government enters into the third stage of e-government, the employees begin to be replaced by web-based self-services. We did not see this with the Business License Department even six months after CLIPS rollout.

Are we observing the next phase of government operation as Weber envisioned it: hierarchical, rigid, inefficient and incapable to serve human clients (Bozeman 2000)? It may be a bit much to suggest that government has not evolved since Weber, but in a 2000 article entitled the Harvard Policy Group of the John F. School of Government warns, “the enormous potential benefits of IT are often compromised if it is used merely to entrench old work processes and organizations rather than to fundamentally redesign them” (Eight Imperatives for Leaders on a Networked World, 2000, p. 7).^{What respondents} have been observing in the Business License Department can be explained by the notion that decision makers do not comprehend the true extent to which CLIPS can operate.

Yes, this is good news to the employee, because they are in no immediate need to begin a job search. The department’s management has full faith and high aspirations invested in CLIPS, but they continue to operate in the manner which has been

culturally accepted by the organization, which leads into questions 15 and 23. Question 15, (results provided in Figure 4,) asked, “did the CLIPS rollout change how you do your job?” The largest response rate was 43 percent indicating “no change.” It can not be overlooked that 40 percent of respondents indicated that their job became “more easy” after CLIPS implementation. Surprisingly, almost 17 percent of the respondents replied that their job became more difficult. This is surprising because the notion of e-government initiatives should be to make obtaining a service easier, for both the public and employee.

Figure 4- Did CLIPS change your job?



Question 23 asked, “does CLIPS decrease the amount of time it takes you to complete your work?” Table 8 indicates that almost 43 percent agree, just over 25 percent are neutral, while under 30 percent disagree with the question. Again, a conclusion can be drawn that CLIPS technology has not been fully realized if almost 30 percent of respondents indicate that more amount of time is needed to complete their tasks post-implementation.

Table 8: Results of Question 23* Cross-tabulated with Position Held

Q 23	Position Held						Total n
	Clerical		Professional Employee		Supervisor		
	n	%	n	%	n	%	
SA			4	100			4
A	3	23	7	54	3	23	13
N	6	55	3	27	2	18	11
DA	1	13	6	75	1	13	8
SD			2	100			2
Total	10	26	22	58	6	16	38

Significance= .68

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Does CLIPS decrease the amount of time it takes you to complete your work?

4.5 Developing Stage Three and the Employee

The fourth and final area the survey instrument was designed to measure was the role (the level of participation and feeling of ownership) employees had in CLIPS development. Numerous studies and papers such as “Top Priority E-Government Guidelines for Heads of Public Agencies, A Blueprint for Successful E-Government Implementation: Steps to Accelerate Culture Change and Overcome Stakeholders Resistance and E-Government Best Practices: An Implementation Manual” indicate the key to a quick transition to new technologies by employees is their involvement in the development process. Involvement of front-line employees during developmental stages has been proven to reduce resistance to technology, technostress and to increase acceptance of organizational shifts associated with new technology.

Questions 1 through 7, 21 and 22 dealt with differing aspects associated with the development of technology. Creating the sense of ownership by employees has been examined as a large hurdle to be overcome by decision makers when facing resistance to technology (Hardy and Leiba-O’Sullivan, 1998). The notion of ownership, simply put, is making front-line employees feel included throughout the development process so they have a stake in the final product. Figure 5 illustrates responses to survey Question 1, “what degree was your involvement in the initial development steps of CLIPS?”

Figure 5- How involved were you?

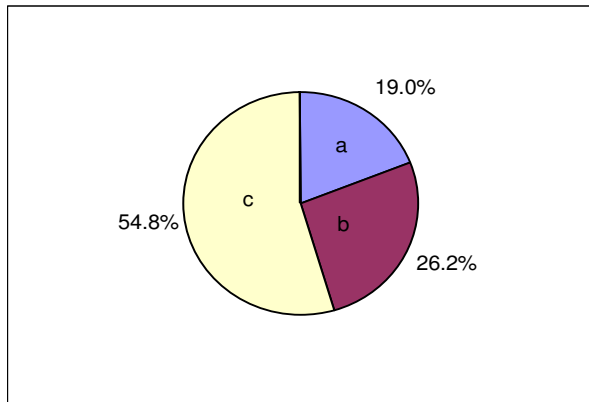
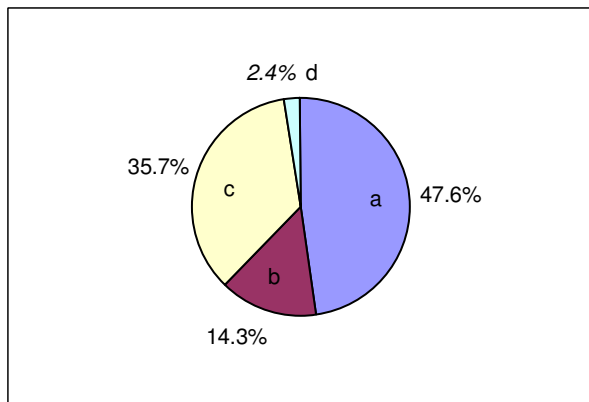


Figure 6 displays responses to the second question on the survey, “did the implementation team request your input regarding CLIPS prior to the applications development?”

Figure 6- Did they request input?



Question 4 attempted to measure feedback employees received from the implementation team once they made suggestions. Over 40 percent indicated that they received no feedback from the team on suggestions they submitted. 26 percent indicated they did receive feedback, while over 21 percent indicated “somewhat, to a degree.” This question is significant because two-way communication between front-line employees and IT personnel or leadership is imperative during the development stage. It has been shown that the higher the level of communication between end-users and developers of

technology the greater the ease of transition into implementing new technology (Simon & Kern, 2001).

Question 5 was a follow-up question, which asked “if yes, were your suggestions/requests received favorably by the CLIPS development team?” This question, similar in tone to question 3, attempted to gauge the implementation team’s willingness to accept suggestions. It should be noted that over 25 percent indicated a “N/a” response and an additional 21 percent of survey participants declined to respond. Having such a high level of non-respondents may serve as an indicator that individuals did not participate in the creating of CLIPS because they truly had no suggestions to offer initially to the implementation team, or that, although respondents indicated they could approach the implementation team, for whatever reason they did not.

Question 7 inquires about CLIPS’s post rollout functionality. “Does CLIPS operate in the manner that the department/development team told you it would function?” When examined closely it is surprising to see that a large majority, 80 percent, of supervisors disagree with this question. This may imply that the communication link between the CLIPS development team and supervisors broke down or possibly the development team over promised the system and under delivered.

Table 9: Results of Question 7* Cross-tabulated with Position Held

Q 7	Position Held						Total n
	Clerical		Professional Employee		Supervisor		
	n	%	n	%	n	%	
SA	1	33	2	67			3
A	4	27	10	67	1	7	15
N	4	50	4				8

DA	2	22	4	44	3	33	9
SD			1		1	50	2
Total	11	30	21	57	5	14	37

Significance= .82

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Does CLIPS operate in the manner in which the department/development team told you it would function?

The last question to be examined is Question 21. This question attempted to measure “buy-in” by management. The concept of buy-in has been highlighted as a key factor to successful adoption of technology by front-line employees. Key components of the buy-in process by management, as indicated by Geoff Humprey *et. al.*,(2001, p. 4) are: “early announcement of anticipated computerization; staff participation in decision making and selection; regular assessment of staff involvement, motivation and interest; staff training to increase acceptance; and ... training as needed for staff” (2001).

Not a single respondent replied negatively to the question, “in your opinion, has the department’s management team supported CLIPS?” Over 85 percent of respondents indicated that they either “strongly agree” or “agree” with the question; only 14 recorded a neutral response. Although no “upper level management” responded to the survey, this is not to say that CLIPS did not receive their full backing; either via cheerleading, financial funding, or by being hands on in plain view of front-line employees. Based on these results all indications suggest employees believed CLIPS implementation had the full backing of management.

Table 10: Results of Question 21* Cross-tabulated with Position Held

Q 21	Position Held						Total n
	Clerical		Professional Employee		Supervisor		
	n	%	n	%	n	%	
SA	4	25	10	63	2	13	16
A	6	33	8	44	4	22	18

N	1	20	4	80			5
D							
SD							
Total	11	28	22	56	6	15	39

Significance= .95

Key: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

*Have the department's management team supported CLIPS?

Chapter V will tie-in the material covered in the literature review with the results of this chapter. Additionally, Chapter V will highlight limitations of this paper and recommend possible areas of expansion on this work.

CHAPTER V- CONCLUSIONS

This study attempts to increase available resources on implementing e-government initiatives entering third stage and coordinating government employee response. To date, little information has been collected from employees in those department that have undertaken e-government initiatives. One existing survey that does seek information regarding e-government and government workers was conducted by the research firm of Peter Hart and Robert Teeter (2000). That study released in August 2000 surveyed 150 government workers and consisted of 22 questions covering a wide array of topics relating to e-government. Results of the Hart-Teeter survey indicated an overall positive attitude toward e-government by employees. For example, Question 4, “Overall, would you say that e-government is having a very positive, somewhat positive, neutral, somewhat negative, or very negative effect on the way that government operates”, 83 respondents indicated a very positive or somewhat positive response, while 11 respondents indicated a neutral response and only one respondent indicated a negative response (2000, p. 4). One limitation of the Hart-Teeter survey is that the research firm randomly selected government employees regardless of level, job title or department’s stage of implementation (one through four).

The results of this study indicate that Clark County Business License Department employees, similar to the Hart-Teeter findings, have a positive perception toward e-government initiatives undertaken in their department. Respondents to the survey generally indicated that they understand the larger purpose for undertaking the e-government project. Additionally, respondents indicated they appreciate the advances in technology associated with CLIPS implementation, a finding which stands in stark

contrast to the vast majority of published literature (Henry, 1994, Humphrey, *et. at.* 2001 and Simon and Kern, 2001). Generally, it is accepted that the longer an employee remains in a position, the higher the resistance to new of incoming technology. This is certainly not the situation in the Business License Department, as only one respondent indicated a negative response. This is a possible indication that management properly introduced the concept of the initiative and its benefits to the employees.

This survey also found that respondents, as government employees who have a real stake in losing a job, realize that importance of e-government initiatives. Results from Question 18 confirm an overwhelming percentage of respondents feel it is important for Clark County to undertake e-government initiatives. This is an unexpected response, again, because government employees have the most to lose under these circumstances. Why is it that Business License Department employees are seemingly unafraid of losing their job to a technology they agree should be explored?

Several factors maybe responsible for this result, the first being the management team of the department researched implementation inhibitors, actively sought input from employees (which was the case based on respondents' answers to the survey question regarding implementation) and properly used buy-in. The second factor is that of Internet reality. It is widely known that approximately 55 percent of the United States population has access to the Internet on a regular basis (Newburger, 2001). Of that 55 percent, only approximately 35 percent actually completed fully executable transactions online (Newburger, 2001). Realistically, employees may know that it will be years before the end-user begins to impact the day-to-day operations of their job. Conservatively, ten years may pass before enough end-users begin to process transactions online to affect the

front-line employees' occupational status. In ten years a significant percentage of employees will have left the department through voluntary actions, e.g.: transferring to another department, retirement and normal attrition. Vacancies created by volunteer actions may make-up the majority of the department downsizing allowing department decision makers the luxury of avoiding staffing cuts.

This study found that when cross-tabulating respondents' results with attitudinal variables, it becomes clear that respondents with a higher level of education (those who have worked for the county fewer than ten years and those who with a higher level of experience) support the initiative more than their less educated counterparts. Individual employees must understand that technology is not phasing out their job, rather it provides an opportunity for them to expand their knowledge base and to personally challenge themselves.

Throughout the process of developing this research paper, I have noted particulars that I would change if faced with repeating this process. First, I would have narrowed the focus of this paper immediately. Admittedly, I tried to tackle too many topics with this paper. Through the course of researching literature, I noticed a void of information regarding the intended research question of this paper, "what happens to the employee when a municipal government department plans to enter into third stage e-government implementation?" Literature topics such as technology and types of e-government services steered me off the intended research question. Although all apply to this paper, I expanded my focus excessively. Secondly, the questions on the survey instrument may be too broad in design. Again, in an effort to fill a void of needed literature, I attempted to use a single survey instrument to cover a vast spectrum of needed research. In so

doing I feel as if I diluted the results of existing questions that can otherwise stand on their own merit.

Even though I received an acceptable response rate with the surveys, almost 60 percent, it is important to be mindful that a response rate of 42 employees can in no way be considered representative of the broader spectrum of municipal government employees. Additionally, it must be highlighted that the Business License Department has not truly entered third stage e-government implementation. As of March 2003, CLIPS has not rolled out to the general public and will not do so until July 1, 2003.

Electronic government is a new technology and one that has evolved relatively quickly. This study can not attempt to answer all of the questions that surround the emerging issues of e-government. Much research is needed in this arena because little has been done to date. Additional research areas that may be examined as a continuation of this survey are: can an established relationship between levels of education and acceptance of e-government initiatives by government employees be found allowing departments to gauge acceptance levels prior to announcing an initiative; can factors, such as years of service within a department or years a employee has held a position, serve as a reliable indicator toward acceptance of e-government initiatives; and does the rate of technology acceptance by the public alleviate or accelerate employee's fears of being eliminated from their job or are there other contributing factors.

As more government departments enter into stages three and four of e-government implementation, additional surveys will need to be administered to determine clear patterns of attitudes. Studies like this one will also benefit department decision makers faced with the prospect of initiating fully executable transactions. Understanding

employees' attitudes toward e-government prior to undertaking such a task will ease the transition not only for decision makers, but also for employees.

APPENDIX A- COVER LETTER

AUGUST 10, 2002

Business License
500 S. Grand Central PKWY 3rd Floor
Las Vegas, NV. 89155-1810

Dear County Employee:

My name is Ben Bond and I have just completed my Management Analyst Internship for the Business License Department. In addition to completing my internship I am completing my studies as a Master's student in the Public Administration at UNLV. I am requesting your assistance in completing the requirements for my program.

The attached survey (which has been reviewed and approved by this department) is a part of the case study I have chosen to conduct on the implementation of electronic government (e-government) applications. Specifically, I am examining e-governments impact on the department's organization and employees' perceptions of these programs. This survey is an attitudes survey that has been designed to try and identify employees' perceptions regarding the process of e-government implementation and its overall effects on organization design.

This survey should take approximately ten minutes to complete. It must also be made aware to you that, as with every type of research study, there are risks involved. However, risks are considered to be minimal in this survey.

I would appreciate your honest and frank response to the enclosed survey. You can be assured that all of the responses will be held in complete confidence. Steps have been taken to ensure that in no way will I try, or be able to, match your answers to you. Of you have any questions or need additional assistance, please contact my advisor, Dr. Karen Layne at 702-895-1914 and reference "CLIPS Survey."

Please complete the survey no later than Friday, August 16, 2002. Upon completion of your survey please drop it off at the front receptionist's desk. All surveys will be picked up Friday August 16, 2002, at five p.m. (If you were not employed by the Business License Department prior to the CLIPS rollout simply return the uncompleted survey to the front receptionist's desk.)

Thank you in advance for your assistance.

Sincerely,

Ben Bond

enclosure:
CLIPS Survey

APPENDIX B- SURVEY INSTRUMENT

Survey questions

1. What degree was your involvement in the initial development steps of CLIPS?
 - a. Completely, I did what was asked of me.
 - b. Somewhat, I did what I could.
 - c. Not at all
2. Did the implementation team request your input (suggestions/ requests) regarding CLIPS prior to the application's development?
 - a. Yes, they did
 - b. Somewhat, to a degree they did
 - c. No, they did not
3. Could you approach the implementation team with your suggestions/ requests?
(SA / A / N / D/ SD)
4. Did you receive feedback about you suggestions/ requests for the CLIPS development team?
 - a. Yes, I did
 - b. Somewhat, to a degree I did
 - c. No, I did not
5. If yes, were your suggestions/ requests received favorably by the CLIPS development team?
(SA / A / N / D/ SD)
6. Were your suggestions/ requests incorporated into CLIPS?
 - a. Yes, they were
 - b. Somewhat, to a degree they were
 - c. No, they were not
7. Does CLIPS operate in the manner in which the department management/ development team told you it would function?
(SA / A / N / D/ SD)
8. Prior to implementation, did you receive enough training on/ with CLIPS ?
(SA / A / N / D/ SD)
9. Was the initial training sufficient?
(SA / A / N / D/ SD)
10. Have you received training after implementation?
 - a. Yes, I have
 - b. No, I have not
11. Has the supplemental training been sufficient?
(SA / A / N / D/ SD)
12. Has CLIPS changed who you report to?
 - a. Yes, it has
 - b. No, it has not
13. Since the implementation of CLIPS the number of tasks you perform has:
 - a. Increased
 - b. Not changed
 - c. Decreased
14. CLIPS has _____ the number of employees needed to staff the department:
 - a. Increased
 - b. Not changed
 - c. Decreased
15. Did the CLIPS rollout change how you do your job?
 - a. More easy
 - b. No change
 - c. More difficult
16. "Organizational change occurs frequently with technology." Do you, personally, agree with this notion?
(SA / A / N / D/ SD)

APPENDIX B- SURVEY INSTRUMENT

Survey Instrument continued,

17. Have the policies and procedures of your section changed as a result of the CLIPS implementation?
 - a. Changed
 - b. Not changed
18. Do you feel it is important for Clark County to undertake electronic government initiatives?
(SA / A / N / D/ SD)
19. Have you received public feedback regarding CLIPS?
 - a. Yes, I have
 - b. No, I have not
20. If yes, indicate what the majority of the feedback has been.
 - a. Favorable
 - b. Neutral
 - c. Unfavorable
21. Have the department's management team supported CLIPS?
(SA / A / N / D/ SD)
22. Does CLIPS operate in the manner you envisioned it would function?
(SA / A / N / D/ SD)
23. Does CLIPS decrease the amount of time it takes you to complete your work?
(SA / A / N / D/ SD)
24. Does CLIPS reduce the steps required for the department to complete its main objective?
(SA / A / N / D/ SD)
25. Does CLIPS reduce the steps that you must take to complete your main task?
(SA / A / N / D/ SD)
26. Does CLIPS reduce the customer's effort to gain their business license?
(SA / A / N / D/ SD)
27. Does CLIPS create a more user-friendly department for the customer? (For example; allow the customer to more efficiently accomplish their business with the department.)
(SA / A / N / D/ SD)
28. Does CLIPS increase customers' accessibility to the department? (For example; ease of obtaining information via telephone, on-line or in person.)
(SA / A / N / D/ SD)
29. Do you feel that CLIPS increases customer satisfaction?
(SA / A / N / D/ SD)
30. In general, are you satisfied with CLIPS?
(SA / A / N / D/ SD)

Demographic Info.

1. How long you worked in county government? (FILL IN)
2. How long have you worked in your current position? (FILL IN)
3. Your gender is? Male / Female
4. What is your birth year? (FILL IN)
5. Your income falls in which level?
 - a. (1- 19,999)
 - b. (20,000- 39,999)
 - c. (40,000- 59,999)
 - d. (60,000 +)
6. Number of years of education? (FILL IN)
7. Which best describes your position?
 - a. (Clerical/ administrative)
 - b. (Professional county employee, i.e. Agent, Auditor, License Technician)
 - c. (Supervisory/ mid-level management)
 - d. (Upper-level management)

APPENDIX C- SURVEY INSTRUMENT RESULTS

Question 1

What degree was your involvement in the initial development steps of CLIPS?

Response	Rate	Percent
a. Completely, 100%, I did what was asked of me	8	19.0%
b. Somewhat, I did what I could	11	26.2%
c. Not at all	23	54.8%
<i>No Response</i>	0	0.0%
Total.	42	

Question 2

Did the implementation team request your input (suggestions/requests) regarding CLIPS prior to the application's development?

Response	Rate	Percent
a. Yes, they did	20	47.6%
b. Somewhat, to a degree they did	6	14.3%
c. No, they did not	15	35.7%
<i>No Response</i>	1	2.4%
Total.	42	

Question 3

Could you approach the implementation team with your suggestions/requests?

Response	Rate	Percent
a. Strongly agree	4	9.5%
b. Agree	17	40.5%
c. Neutral	10	23.8%
d. Disagree	6	14.3%
e. Strongly disagree	2	4.8%
<i>No Response</i>	3	7.1%
Total.	42	

Question 4

Did you receive feedback about you suggestions/requests from the CLIPS develop team?

Response	Rate	Percent
a. Yes, I did	11	26.2%
b. Somewhat, to a degree I did	9	21.4%
c. No, I did not	17	40.5%
<i>No Response</i>	5	11.9%
Total.	42	

Question 5

If yes, were your suggestions/requests received favorably by the CLIPS develop team?

Response	Rate	Percent
a. Strongly agree	0	0.0%
b. Agree	16	38.1%
c. Neutral	5	11.9%
d. Disagree	0	0.0%
e. Strongly disagree	1	2.4%
f. Na	11	26.2%
<i>No Response</i>	9	21.4%
Total.	42	

Question 6

Were your suggestions/requests incorporated into CLIPS?

Response	Rate	Percent
a. Yes, they were	6	14.3%
b. Somewhat, to a degree they were	18	42.9%
c. No, they were not	11	26.2%
<i>No Response</i>	7	16.7%
Total.	42	

Question 7

Does CLIPS operate in the manner in which the department/development team told you it would function?

Response	Rate	Percent
a. Strongly agree	3	7.1%
b. Agree	16	38.1%
c. Neutral	8	19.0%
d. Disagree	10	23.8%
e. Strongly disagree	3	7.1%
<i>No Response</i>	2	4.8%
Total.	42	

Question 8

Prior to implementation, did you receive enough training on/with CLIPS?

Response	Rate	Percent
a. Strongly agree	4	9.5%
b. Agree	9	21.4%
c. Neutral	10	23.8%
d. Disagree	13	31.0%
e. Strongly disagree	6	14.3%
<i>No Response</i>	0	0.0%

Total. 42

Question 9

Was the training sufficient?

Response	Rate	Percent
a. Strongly agree	3	7.1%
b. Agree	11	26.2%
c. Neutral	9	21.4%
d. Disagree	16	38.1%
e. Strongly disagree	3	7.1%
No Response	0	0.0%
Total.	42	

Question 10

Have you received training since implementation?

Response	Rate	Percent
a. Yes, formal training	7	16.7%
b. Yes, on the job training	30	71.4%
c. No, I have not	3	7.1%
d. Other	2	4.8%
No Response	0	0.0%
Total.	42	

Question 11

Has the supplemental training been sufficient?

Response	Rate	Percent
a. Strongly agree	2	4.8%
b. Agree	18	42.9%
c. Neutral	11	26.2%
d. Disagree	6	14.3%
e. Strongly disagree	2	4.8%
No Response	3	7.1%
Total.	42	

Question 12

Has CLIPS changed to whom you report to?

Response	Rate	Percent
a. Yes, my supervisor has changed	1	2.4%
b. No, my supervisor has not changed	41	97.6%
No Response	0	0.0%
Total.	42	

Question
13

Since the implementation of CLIPS the number of tasks you perform has:

Response	Rate	Percent
a. Increased	16	38.1%
b. Not changed	18	42.9%
c. Decreased	7	16.7%
d. Other	1	2.4%
<i>No Response</i>	0	0.0%
Total.	42	

Question
14

CLIPS has _____ the number of employees needed to staff the department?

Response	Rate	Percent
a. Increased	5	11.9%
b. Not changed	29	69.0%
c. Decreased	4	9.5%
d. Other	4	9.5%
<i>No Response</i>	0	0.0%
Total.	42	

Question
15

Did the CLIPS rollout change how you do your job?

Response	Rate	Percent
a. More easy	17	40.5%
b. No change	18	42.9%
c. More difficult	7	16.7%
<i>No Response</i>	0	0.0%
Total.	42	

Question
16

"Organizational change occurs frequently with technology." Do you personally, believe this concept?

Response	Rate	Percent
a. Strongly agree	13	31.0%
b. Agree	18	42.9%
c. Neutral	8	19.0%

d. Disagree	1	2.4%
e. Strongly disagree	0	0.0%
<i>No Response</i>	2	4.8%
Total.	42	

Question
17

Have the policies and procedures of your section changed as a result of the CLIPS implementation.

Response	Rate	Percent
a. Changed	30	71.4%
b. Not changed	12	28.6%
<i>No Response</i>	0	0.0%
Total.	42	

Question
18

Do you feel it is important for Clark County to undertake electronic government (e-govt.) initiatives?

Response	Rate	Percent
a. Strongly agree	19	45.2%
b. Agree	17	40.5%
c. Neutral	3	7.1%
d. Disagree	2	4.8%
e. Strongly disagree	0	0.0%
<i>No Response</i>	1	2.4%
Total.	42	

Question
19

Have you received public feedback regarding CLIPS?

Response	Rate	Percent
a. Yes, I have	22	52.4%
b. No, I have not	20	47.6%
<i>No Response</i>	0	0.0%
Total.	42	

Question
20

If yes, indicate what the majority of the feedback has been.

Response	Rate	Percent
a. Favorable	12	28.6%
b. Neutral	9	21.4%
c. Unfavorable	3	7.1%
d. NA	7	16.7%

<i>No Response</i> *	11	26.2%
Total.	42	

* all non response answered "No" to question 19

Question
21

Have the department's management team supported CLIPS?

Response	Rate	Percent
a. Strongly agree	15	35.7%
b. Agree	21	50.0%
c. Neutral	6	14.3%
d. Disagree	0	0.0%
e. Strongly disagree	0	0.0%
<i>No Response</i>	0	0.0%
Total.	42	

Question
22

Does CLIPS operated in the manner in which you envisioned it would function.

Response	Rate	Percent
a. Strongly agree	2	4.8%
b. Agree	14	33.3%
c. Neutral	9	21.4%
d. Disagree	12	28.6%
e. Strongly disagree	3	7.1%
<i>No Response</i>	2	4.8%
Total.	42	

Question
23

Does CLIPS decrease the amount of time it takes you to complete your work?

Response	Rate	Percent
a. Strongly agree	5	11.9%
b. Agree	13	31.0%
c. Neutral	11	26.2%
d. Disagree	11	26.2%
e. Strongly disagree	1	2.4%
<i>No Response</i>	1	2.4%
Total.	42	

Question
24

Does CLIPS reduce the steps required for the department to complete its main objective?

Response	Rate	Percent
a. Strongly agree	2	4.8%
b. Agree	14	33.3%
c. Neutral	12	28.6%
d. Disagree	12	28.6%
e. Strongly disagree	1	2.4%
<i>No Response</i>	1	2.4%
Total.	42	

Question
25

Does CLIPS reduce the steps that you must take to complete your main task?

Response	Rate	Percent
a. Strongly agree	4	9.5%
b. Agree	13	31.0%
c. Neutral	6	14.3%
d. Disagree	16	38.1%
e. Strongly disagree	2	4.8%
<i>No Response</i>	1	2.4%
Total.	42	

Question
26

Does CLIPS reduce customer's effort to gain their business licenses?

Response	Rate	Percent
a. Strongly agree	1	2.4%
b. Agree	10	23.8%
c. Neutral	15	35.7%
d. Disagree	12	28.6%
e. Strongly disagree	2	4.8%
<i>No Response</i>	2	4.8%
Total.	42	

Question
27

Does CLIPS create a more user-friendly department for the customer? (For example; allow the customer to more efficiently accomplish their business with the department.)

Response	Rate	Percent
a. Strongly agree	2	4.8%
b. Agree	12	28.6%
c. Neutral	17	40.5%

d. Disagree	8	19.0%
e. Strongly disagree	1	2.4%
<i>No Response</i>	2	4.8%
Total.	42	

Question
28

Does CLIPS increase customer's accessibility to the department? (For example; ease of obtaining information via telephone, on-line or in person.)

Response	Rate	Percent
a. Strongly agree	3	7.1%
b. Agree	14	33.3%
c. Neutral	14	33.3%
d. Disagree	9	21.4%
e. Strongly disagree	1	2.4%
<i>No Response</i>	1	2.4%
Total.	42	

Question
29

In your opinion, do you feel CLIPS has increased customer satisfaction?

Response	Rate	Percent
a. Strongly agree	1	2.4%
b. Agree	12	28.6%
c. Neutral	16	38.1%
d. Disagree	11	26.2%
e. Strongly disagree	0	0.0%
<i>No Response</i>	2	4.8%
Total.	42	

Question
30

In general, are you satisfied with CLIPS?

Response	Rate	Percent
a. Strongly agree	3	7.1%
b. Agree	21	50.0%
c. Neutral	7	16.7%
d. Disagree	11	26.2%
e. Strongly disagree	0	0.0%
<i>No Response</i>	0	0.0%
Total.	42	

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