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Charmane A. Hayman
2002**

**Electronic Government (E-Government): Deal Makers and Deal
Breakers**
**Analysis of E-Government State of Texas – TexasOnline and Other State-
Level Planning and Implementation Best Practices**

by

Charmane A. Hayman, B.S.

Professional Report

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Level Planning and Implementation Best Practices**

Approved by Supervising Committee:

Lodis Rhodes

Gary Chapman

Dedication

This work is dedicated in loving memory of my mother, Leona Hayman. Because of your love, persistence and constant planting of seeds, then tilling of soil for my spiritual, physical and emotional growth – although late after your season – the bearing of sweet fruit continues. My love and deepest gratitude to you always.

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Professor Lodis Rhodes, thanks seems too small an expression for all that you have shared. Your wisdom, intelligence and non-traditional pedagogical methods pushed to always strive for the highest goals obtainable—and then some! Professor Gary Chapman my sincere gratitude for your straight-forward and frank comments and feedback, it really helped guide me to form a structurally sound report.

Sabrina Wadley and Linda Davis Kyle helped with proofreading and offering brutally honest suggestions on structuring my writing style.

Last, but not least, my husband and rock, Bobby—all of your patience, support and love are priceless!

Abstract

**Electronic Government (E-Government): Deal makers and Deal Breakers
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Charmane A. Hayman, M.P.Aff.

The University of Texas at Austin, 2002

SUPERVISOR: Lodis Rhodes

This professional report attempts to examine, evaluate and analyze how state governments plan and implement electronic government (e-government) systems. The primary focus of this research is the State of Texas e-government system, TexasOnline. However, I also evaluated programs in California, Iowa, Minnesota, North Carolina, and Washington.

The goal is to compare these states' e-government planning and implementation processes to reveal the pattern of best practices necessary to develop an effective e-government system. Most importantly, the report asks the questions: 1) what resources and investments are being made? 2) who are the decision makers (i.e. investments, planning, design)?, 3) Who chooses the skilled professionals to design an e-government system and troubleshoot any technical issues? Theoretically, after these and other questions have been answered some patterns should emerge in these areas to reflect how state public leaders choose to finance, plan, and implement e-government systems.

Finally, various qualitative research methods such as: interviews, surveys, participant and non-participant observations, literature reviews and content analysis assist to extract and analyze the data. The anticipated outcome of this research report is to add to the existing "best practices" guidelines to planning and implementing an effective and efficient e-government system, to include safeguards for the issues of accessibility and uniformity of online documents.

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Chapter 1. Introduction

“Best practices research is an organized attempt to learn from the successes and failures of others.” Center for Technology in Government: Tying A Sensible Knot, Looking for Existing Models

Glen, Director of Human for the State of the Unknown, is frantically contemplating which window to leap out – why? The highly publicized launch of his agency’s electronic government (e-government) service-delivery and information system is incapable of being launched. The media are in place; and the governor is meeting with directors from other states interested in speaking with Glen about this new e-government system. Unfortunately, he is in a quandary. His design team has either overlooked or not identified required technical steps during the planning and implementation phases of this project. It is times like this when Glen, and other public administrators in his predicament, would like to take Southwest Airlines up on their slogan - “Want to Get Away?”

Although this was a hypothetical scenario, there are quite a few directors’ who have felt the anxiety that Glen experienced. Such occurrences do happen, but to decrease the likelihood of similar occurrences the key is to learn from the best practices of other people and tailor a strategic plan to fit an agency’s particular needs and desires. Learning from the best practices of others is nothing new to government; however, the delivery of service via the Internet and computers is still a novel concept.

Many public officials know that e-government is a service option that must be developed and provided to its citizens. In this report e-government is described as the application of information and communication technology to transform the efficiency, effectiveness, transparency and accountability of

informational and transactional exchanges within government, between governments and government agencies at federal, municipal and local levels, citizens, and businesses; and to empower citizens through access and use of information.¹

The full integration e-government, to the exclusion of person-to-person interaction and service provision, is excessive and unrealistic. However, the private sector is providing more, up-to-date information and efficiency in service online. Citizens are requiring the same from the government agencies. Public administrators must think differently about when to plan and implement e-government systems. They must move from the traditional business-as-usual strategic planning to newer ways to design, develop, and provide government services that will increase citizen access to information and civic participation.

Government agencies should provide citizens with the most efficient, productive, up-to-date and user-friendly services available. In addition, they must develop citizen-focused Internet services, learn how to build capacity, strip away traditional boundaries and offer services that would never exist in the physical world.² Toward this aim, the State of Minnesota offers a virtual career placement service (ISEEK)³, a seamless, comprehensive service that was never possible in the [physical world] because agencies could not co-locate [all of] their services to [meet that need].⁴ The use of best practices would prove favorable in meeting the aforementioned goals.

¹ Center for Democracy & Technology, Online. Available: <http://www.cdt.org/egov/descriptions.shtml>. Accessed: June 4, 2001.

² Tod Newcombe, "If You Build It, Will They Come," Government Technology, Online. Available: <http://www.govtech.net/magazine/servicecitizen/ifttheybuildit.phtml>. Accessed: July 8, 2001

³ ISEEK, the Internet System for Education and Employment Knowledge, is a Web-based gateway to Minnesota career, employment, education, and business development information and services. <http://www.iseek.org>.

⁴ Ibid.

Steven Clift, former coordinator of North Star, Minnesota’s onramp to government information and services on the Internet, stresses that best practices have emerged over time.⁵ He adds, “The practices are not unique to government, but they can aid agencies when it comes to good design.”⁶ Some of those best practices include (See Table 1.1):⁷

Table 1.1
E-Government Website Design Best Practices (Examples)

• Using smaller, optimized images.
• Building a home page with lots of functionality and attention to navigation, versus using lots of text.
• Providing users with different download options, such as HTML or PDF.
• Providing e-mail addresses so users can leave comments or make inquiries.
• Using “Alt tags,” which describe the content of an image, so that the visually impaired can “read” images on browsers.
• Making sure users can find the information they seek in three clicks of the mouse or less.
Adapted from Tod Newcombe, “If You Build It, Will They Come,” <i>Government Technology</i> , Online. Available: http://www.govtech.net/magazine/servicecitizen/ifttheybuildit.phtml . Accessed: July 8, 2001

The preparation and provision of reports that focus on best practices of various factors of e-government development is necessary. It appears to be a gradual progression toward compiling such reports. As technology grows at a rapid pace so must the documentation strive to provide current information on effective e-government systems. According to Greg Curtin, chief executive of the Civic Resource Group claims, “One of the major requests [his office receives] is for research on best practices for [e-government].”⁸

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Brian Robinson, “Who Cares About E-Government?” *Federal Computer Week*, (2002). Online. Available: <http://www.fcw.com/geb/articles/2002/0311/web-city3-03-13-02.asp>. Accessed: March 28, 2002.

Purpose of the Report

The average government has between 50 and 70 different departments and agencies, and many citizens are confused about which agency is responsible for particular services. Government agencies are taking steps to respond to their concerns by creating seamless online systems.⁹ The goal of this report is to examine and determine how Texas officials decided to plan, develop, finance and implement e-government systems at the state level—specifically examining the seamless TexasOnline system. A seamless service is required to simplify the online process and decrease the confusion experienced by citizens requiring government services.

This report focuses on the official state portal TexasOnline and investigates who are the typical decision-makers, in the State of Texas and other states, regarding planning and implementing an online service systems. Additionally, the best practices of other states are discussed to determine common and/or contrasting patterns across state-level government agencies.

Furthermore, it primarily examines state-level e-government initiatives¹⁰ because state administrators typically decide the need for e-government systems at all government levels. State decision-makers are responsible for business strategy and procedures, cost/benefit analysis, process improvements for the Internet applications, as well as implementing agency-specific components of electronic security architecture.¹¹ In addition, state agencies provide the senior executive management and technical expertise necessary to plan, design, and implement an e-government initiative. Most importantly, citizens are using government websites for a range of reasons

⁹ Email from Stuart Greenfield, Visiting Professor, LBJ School of Public Affairs, University of Texas at Austin, "The Next Revolution –Economist.com, online article," to Charmane Hayman, December 3, 2001.

¹⁰ Some local government level e-government examples will be discussed in Chapter 3, Funding

¹¹ Access Washington, Digital Government Plan. Online. Available: <http://www.access.wash.gov>. Accessed: January 11, 2002.

from renewing a driver's license to learning about health issues. For example, according a recent report, federal and state websites are popular among citizens and businesses – 76% visit state sites.¹²

Finally, the goal of this report is to examine and compare other states with the State of Texas on the issues concerning:

- What resources are available?
- What investments are made when developing e-government systems?
- Who makes the resource allocation and investment decisions?
- Are the decisions made individually or as a team?
- Are the appropriate individuals chosen with the skills necessary to recognize any technical issues (i.e. design issues, web-based graphic and user interface)?

Research Methodology

The research methodology for this report uses descriptive and qualitative analytical methods to explore numerous facets involved in the planning and implementing state-level e-government systems. Because this report focuses on determining best practices in planning and implementing e-government at the state-level, a “practical ideal type” conceptual framework method is used. According to Shields, practical ideal types can be viewed as standards or points of reference.¹³ This conceptual framework generally is

¹² Pew Internet and American Life Project, *The Rise of the E-Citizen: How People Use Government Agencies' Web Sites*, (April 3, 2002). Online. Available: <http://www.pewinternet.org/reports>. Accessed: April 10, 2002.

¹³ Patricia M. Shields, “Pragmatism As Philosophy of Science: A Tool for Public Administration,” JAI Press, (1998), pp. 215

organized by category. Shields sums up that the practical ideal types provide benchmarks with which to understand and improve reality.¹⁴

The primary unit of analysis for this report is the State of Texas, TexasOnline e-government system. A benchmark criterion to determine best practices comes from a report published by the Center for Technology in Government, *Tying A Sensible Knot*. (See Table 1.2)

¹⁴ Ibid.

Table 1.2
Practical Ideal Categories for “Best Practices” E-Government

Planning and Implementation	Source	Research Questions
<ul style="list-style-type: none"> • Define purpose and scope • Choose a well-skilled and respected project leader • Recruit the right project team • Sell the project to decision-makers • Communicate often and clearly with stakeholders • Finance creatively • Look for existing models • Understand and improve processes before you apply technology • Use prototypes to ensure understanding and agreement about design • Choose a capable pilot site • Review and evaluate performance 	<p>Center for Technology in Government (1997)</p>	<ul style="list-style-type: none"> • Who are the decision-makers? • What are the standards? • How many state-level e-government initiatives incorporate all or most of these benchmarks?
<p>Adapted from Center for Technology in Government, Tying A Sensible Knot: A Practical Guide to State-Local Information</p>		

Table 1.2 shows how the categories are operationalized into questions for the literature review in order to compare and contrast any identifiable themes. The empirical data contained in the CTG report was derived by administering surveys, conducting interviews, and reviewing projects

documents of 150 individuals from 67 state, county, and municipal agencies, nonprofit organizations and professional associations.¹⁵

A sample of 10 websites and 10 government reports provided the necessary data to conduct content analysis of best practices. E-government systems in different geographic regions (i.e. West, Southwest, Northeast, Northwest, South/Southeast) are included in the sample.¹⁶

The 10 websites and 10 government reports were measured against standards in the practical-ideal type e-government system. A coding method was used to determine which states exhibited best practices methods for planning and implementing, cost-benefits and accessibility issues of e-government systems.

Phone and person-to-person interviews were used to clarify any questions or discrepancies in interpreting data as well as share other pertinent information relevant for this report. Interviews were conducted with staff from the following State of Texas, state-government agencies: Office of the Governor, State Grants Team; Department of Information Resources (DIR); Texas Education Agency, and TexasOnline.

The states chosen for discussion are California, Iowa, Minnesota, North Carolina, Virginia, and Washington. Of the states chosen each had to have slightly more than half of the best practices criteria in the text describing process of developing and implementing an e-government system.

Content analysis is the primary method used to verify best practices among the states analyzed in this report. A comprehensive literature review of various publications regarding best practices for planning and implementing, cost-benefits and accessibility issues of e-government systems at the state-level is also included.

¹⁵ Center for Technology in Government, Tying A Sensible Knot: A Practical Guide to State-Local Information, Online. Available: <http://www.ctg/albany.edu>. Accessed: June 4, 2001

¹⁶ Kenneth S. Bordens and Bruce, B. Abbott, Research Design and Methods: A Process Approach (Mayfield Publishing Company: London, 1996), p. 208.

Additionally, field notes from an internship with the State of Texas Grants Team will provide some important background information for this research report. A summary of the results regarding the existence of patterns across states that execute best practices, presented in a compare and contrast format is further explained in depth in Chapters 3, 4 and 5.¹⁷

Report Structure

This section provides a brief synopsis of the contents for the other chapters in this report:

Chapter 2 - Discussion of the need for a new way of thinking when planning government service-delivery programs and systems. Literature review of public leaders decision-making “best practices” for an effective e-government system based on three categories: (1) planning and implementing, (2) funding, and (3) accessibility.

Chapter 3 - Setting chapter, which is the primary focus of analysis for this report. Examines best practices according to the three categories for the State of Texas’ e-government system–TexasOnline.

Chapter 4 - Case Studies: Content analysis of the states Washington, Minnesota, and Iowa regarding **category 1**—Planning and Implementing; Research Findings/Compare and Contrast.

Chapter 5 – Case Studies: Content analysis of the states California (local government) and North Carolina regarding **category 2**—Funding; Research Findings/Compare and Contrast;

Chapter 6 – Discusses the digital divide and its contributing factors, and the role of policy-makers to address the issue. Case studies: Content analysis of the states North Carolina and Virginia regarding **category 3**—Accessibility; Research Findings/Compare and Contrast.

¹⁷ The research findings will be at the end of each chapter to provide quick reference for each category.

Chapter 7 – Conclusion: Restate research purpose and discuss how, or if findings address the purpose of the report. Recommendations for TexasOnline and future research, what is the future of e-government? (e-government vs. e-governance).

Furthermore, Table 1.3 provides a conceptual framework for the structure of the Funding and Accessibility chapters.

Table 1.3
Conceptual Framework – Funding and Accessibility Chapters

Chapter	Sources	Research Questions
<p><i>Funding</i></p> <ul style="list-style-type: none"> • Costs (up-front, back-end, long-term) • Economies of scale • Business incentives • Taxes • Costs and Benefits (financial and human) 	<p>Report for General Assembly – North Carolina (2001) Strategic Report, Ventura County, CA (2001)</p> <p>Fisher (1996)</p> <p>Mikesell (1999)</p>	<ul style="list-style-type: none"> • What role does the federal government play in funding state-level e-government initiatives? • What role does the state government play in funding state-level e-government initiatives? • What are the costs and/or benefits of an e-government system? • What are some of the economically practical approaches?
<p><i>Accessibility</i></p> <ul style="list-style-type: none"> • Digital Divide • Education • Policy Makers 	<p>Digital Divide Network (2000)</p> <p>Harrigan (1998)</p> <p>TexasOnline: Feasibility Report on E-Government (2000)</p>	<ul style="list-style-type: none"> • What is the “digital divide”? • Does education play a role in accessibility to e-government services? • What roles do policy-makers play in decisions regarding the improvement to e-government services for all citizens?
<p>Source: Adapted from Center for Technology in Government, Tying A Sensible Knot: A Practical Guide to State-Local Information</p>		

Chapter 2. E-Government: Taking Government Service Delivery to Cyberspace – Requires a New Way of Thinking

*“Government wants to use the Internet to deliver services, but it will have to follow a whole new set of rules to make it work.” Tod Newcombe, Associate Editor,
Government Technology*

Historically, government services have primarily been provided in the form of person-to-person interaction. However, many public leaders are leading the charge for government agencies to take service delivery to the next level – e-government. According to the Center for Technology in Government, public leaders believe that e-government will increase productivity and service efficiency in the following ways:¹⁸

- Improve access to government services at a lower cost. Citizens can access services 24 hours a day, 7 days a week.
- Provide a user-friendly interface. Websites need to be intuitive and easy to understand by a large number of people.
- Enhance the ability to improve business process. Example: Cut out middle layers of usual government transactions for collecting necessary information for processing.
- Help to integrate diverse systems. Example: The Internet will provide the capability to integrate multiple applications running on different computing platforms.

¹⁸ Center for Technology in Government. Tying a Sensible Knot: A Practical Guide to State-Local Information Systems. New York State Governor’s Task Force on Information Resource Management Local Government Subcommittee. Albany: CTG 1997.

In addition, surveys conducted by states and studies conducted by research organizations showed that citizens wanted particular services to be provided electronically.¹⁹ (See Table 2.1)

Table 2.1
Government Services Citizens Request to Offer Electronically

• Renewing a driver’s license
• Registering to vote
• Making reservations at state parks and acquiring information
• Voting on the Internet
• Being able to access to one-stop shopping (one portal for all government services)
• Ordering birth, death, and marriage certificates
• Filing state taxes
• Applying for and receiving hunting and fishing licenses
• Accessing medical information from National Institute of Health
Adapted from Center for Technology in Government – What Citizens Want from E-Government, October 2000.

The Center for Technology report discovered that renewing a driver’s license was the typical first choice followed by being able to register to vote. However, a common theme was the notion of finding one-stop shopping for government services and accessing specific government information (i.e., health data).²⁰

Many key decision-makers in state-level government agencies are planning and implementing Web-based transactional services for their citizens. Consequently, there are a number of hurdles that will stand in

¹⁹ Meghan E Cook, “What Citizens Want From E-Government: Current Practice Research.” Center for Technology in Government. (2000), pp. 4. Online. Available: <http://www.ctg.albany.edu> Accessed: March 31, 2002.

²⁰ What Citizens Want from E-Government, Center for Technology in Government, was written by Meghan E. Cook in October 2000. However, compared with a more recent report, Pew Internet and American Life Project, health data is still of interest to citizens to access online. <http://www.pewinternet.org/reports>.

the way, ranging from reliability and performance of Web-based services to questions about security and the legal status for operating certain types of services in cyberspace. A major issue for many government officials, particularly at the state level, is whether they are ready to re-think the way services are delivered to customers.

New Thinking is Mandatory

According to industry experts, the public sector can learn some important lessons from the success in productivity and efficiency of services experienced in the private sector. Developing and implementing a service for citizens “requires a new way of thinking,” suggests Carl Hage, an Internet consultant who has worked with a number of government agencies developing websites.²¹

Unlike the private sector, public leaders face the systemic pressures that are unique to the public sector. A report released by Harvard University²² suggests some of these pressures are (1) risk aversion, (2) conflict avoidance, (3) limited funding, and (4) scarce knowledge, which all serve to discourage rapid and fundamental change in government. Brief descriptions of each are as follows (See Table 2.2)²³:

²¹ Information from article written by Tod NewCombe, Associate Editor, Online, Government Technology Service, discussing the State of Minnesota’s model e-government system – North Star.

²² The Harvard Policy Group on Network-Enabled Services and Government (HPG) includes legislative and executive leaders, private-sector and public-sector leaders, technology managers and general managers, and public officials from federal, state, and local governments in the United States and Canada.

²³ John F. Kennedy School of Government - The Harvard Policy Group on Network-Enabled Services and Government, Eight Imperatives for Leaders in a Networked World: A Series of Guidelines for the Year 2000 and Beyond, Imperative 2: Use IT for Strategic Innovation, Not Simply Tactical Automation, (2000). Available: <http://www.ksg.harvard.edu/stratcom/hpg/Imp2.pdf> Accessed: February 8, 2002.

Table 2.2
Public Leader Systemic Pressures Regarding E-Government

Risk Aversion	Citizens depend on large government systems for . . . water supply, transportation, banking, police protection, and other public services. Such systems are expected to be reliable, efficient and effective. When the downside risks of change are enormous—as is often the case with government—a conservative bias seems rational.
Conflict Avoidance	Some opposition arises because pilot projects are inevitably inequitable, treating test groups differently from control groups. Further opposition may come from those who do not like [the way] benefits from innovation are divided among service recipients, taxpayers, and government employees. Opposition is also generated (at least initially) by concerns that government may abuse its powers.
Limited Funding	While public leaders are feeling pressure to keep up with new standards of performance, they are also feeling the continuing pressures of fiscal constraints. The requirement to do more with less clearly calls for new ideas, but . . . budgets focused on program-by-program allocations make it particularly hard to fund some programs which often require enterprise-wide investments.
Scarce Knowledge	Governments are still struggling to understand how information technologies can best be used. Trends emerge and sometimes recede, but reliable knowledge about the future of e-government is scarce.
Adapted from Eight Imperatives for Leaders in a Networked World, Imperative 2: Use IT for Strategic Innovation, Not Simply Tactical Automation, The Harvard Policy Group on Network-Enabled Services and Government, John F. Kennedy School of Government.	

Although the public sector has challenges to overcome, some public leaders see opportunities. Administrators seek out skilled professionals to find solutions to these challenges that will be beneficial to government, but most importantly to the citizens. E-government initiatives require many skilled professionals from various fields including the public, private and

community sectors. Bringing all of these people together to design, develop and implement an e-government system is a monumental task.

A practice that would be useful in assisting decision-makers with the aforementioned challenges is using a conceptual framework of categorization. Kaplan²⁴ describes the process:

The [topic] being studied is classified and analyzed . . . [topics] are grouped together.

Hickman further suggests that this process of sorting is done on the basis of [the] need to draw certain inferences to . . . produce instruments that will be effective in the resolution of experienced difficulties.²⁵ According to Shields, classification of a topic into categories is a powerful conceptual tool that is rarely used by practitioners. Using this process as a tool for organization can be beneficial to a policy-maker faced with developing an e-government system.

Researchers use this approach as well to link the question or purpose for the exploration and the method of research. Thus, the categorical process provides organization and concentration for the topic of discussion. As outlined in the introduction, this chapter explores the best practices of public administrators, in various states, during the decision-making process of producing an e-government system. Literature from experts and other professionals in this field of interest were reviewed to develop the following categories: (1) planning and implementing, (2) funding, and (3) accessibility.

Common Principles in Best Practice State-Level E-Government Systems

There are a few common principles that are consistent in any successful e-government strategy. State government agencies must plan e-

²⁴ A. Kaplan, *The Conduct of Inquiry: Methodology for Behavioral Science* (Scranton, PA: Chandler Publishing Co., 1964), pp.50.

²⁵ L. J. Hickman, *Dewey's Pragmatic Technology* (Bloomington, IN: Indiana University Press, 1990), p. 129.

government systems with the citizen, not the agency, as a priority. It would be most practical to provide pertinent information of all state agency functions and contact information so that the citizen's search efforts are minimized.

Knowledge is Power – Educating All the Key Players

Educating the public about the benefits of private partnerships with the state would be useful. Furthermore, ensuring that citizens' e-government activities are private and secure is very important. Another area that is of equal importance is building a strong, efficient, and productive team to produce the best online service model. Identifying the key stakeholders in the government, business, and the community is essential to developing an effective seamless e-government system.

Identifying Stakeholders – Public-Sector, Private-Sector, and Community

One of the first questions to ask when planning an e-government system is, "Which government agencies will be affected by this project?" Although there are many stakeholders, the initial stakeholders are the government agencies. They decide or are directed to provide e-government services via the Internet.

The next step is to begin identifying which agencies are the stakeholders and to ensure that among them are the most appropriate to help plan, design and implement e-services. It is crucial for any public administrator planning an e-government system to understand that the ability to manage any project effectively is based upon the success in choosing the most suitable people for the tasks assigned.²⁶

²⁶ Center for Technology in Government, Tying A Sensible Knot: A Practical Guide to State-Local Information Systems, p. 12, (June 1997). Online. <http://www.ctg.albany.edu/resources/pdfrwp/iis1.pdf>. Accessed: June 13, 2001.

One example of such an action was exercised by the Electronic Grants Technical Assistance Workgroup (EGTAW), State of Texas, when starting the planning efforts to develop an online electronic grants system.²⁷ They sent out a request for committee members and clearly expressed the goals of the committee. The decisive components that provide the most support and strength to achieving project objectives are how the team is built and how it operates (i.e., leadership, problem solving, organization, environment).

Team Building – A Step at a Time

LaFasto and Larson collected and analyzed responses from more than 6,000 team members and leaders, in both the public and private sectors, to find out exactly what conditions help or hinder teams in achieving their goals.²⁸ According to their findings, the *Connect Model*²⁹ is a proven approach to building effective team relationships. It has been tested with several thousand working relationships in 15 different organizations (See Table 2.3).³⁰

Table 2.3
Connect Model – Team Relationships

Step by Step
Step 1. Commit to the [team] relationship
Step 2. Optimize safety

²⁷ EGTAW’s primary goal of the workgroup is to facilitate the development of a simplified, integrated and efficient state-level web-based common face for grant assistance programs to mutually benefit the people and government of Texas. The result will be a one-stop electronic system for grant submission.

²⁸ Frank, LaFasto and Carl Larson. *When Teams Work Best: 6000 Team Members and Leaders Tell What It Takes to Succeed* (California: Sage Publications, 2001), p. xi.

²⁹ The Connect Model is a step-by-step process for building and sustaining collaborative team relationships.

³⁰ Frank, LaFasto and Carl Larson. *When Teams Work Best: 6000 Team Members and Leaders Tell What It Takes to Succeed* (California: Sage Publications, 2001), p. 54-61.

Step 3. Narrow to one issue
Step 4. Neutralize defensiveness
Step 5. Explain and echo
Step 6. Change one behavior [at a time]
Adapted from <i>When Teams Work Best</i> , LaFasto and Larson, 2001

One aspect often taken for granted by individuals is the ability to communicate effectively. Many of us believe that during our conversations with each other that we are accurately and effectively conveying the intended message. More often than not, we are wrong. The Connect Model attempts to do two things simultaneously: (1) recognize that the working relationship is the process we do *with* someone and not *to* someone, and (2) build strong working relationships with a proactive approach rather than an after-the-fact assessment.³¹ In addition, Stephen R. Covey, author of the successful, *The Seven Habits of Highly Effective People*, agrees with the sentiment of taking a proactive approach. For example, he suggests that being proactive means recognizing our responsibility to make things happen.³² Likewise, LaFasto and Larson suggest that three common variables emerged from the research of effective teams, which include: (1) possessing essential skills and abilities, (2) realizing a strong desire to commit, and (3) possessing the capability to collaborate effectively.³³

³¹ Ibid.

³² Stephen R. Covey, *The Seven Habits of Highly Effective People: Powerful Lessons in Personal Change* (New York: Simon and Schuster, 1989), p.5.

³³ Carl E Larson and Frank M. J. LaFasto, *Teamwork: What Must Go Right/What Can Go Wrong* (California: Sage Publications, 1989), p. 69-70.

Problem Solving – Effective Technique

Almost anyone who has worked on a team/group effort has at least one horror story to share regarding getting stuck on solving a problem. An effective technique used to work through such challenges is the *Single Question Format*. (See Appendix A) This technique was developed, over the past 30 years, to help teams accomplish the following objectives (See Table 2.4).³⁴

Table 2.4
Single Question Format – Team Objectives

<ul style="list-style-type: none">• Promote sharp focus for the team’s effort by getting the team to agree on one question that, if answered, will provide the solution to the problem at hand.
<ul style="list-style-type: none">• Delay consideration of solutions until a thorough analysis of the problem has been completed. (One of the most widely recognized weaknesses in group and team problem solving has been premature solutions.)
<ul style="list-style-type: none">• Good solutions, when problem solving, depends on how adequate the analysis was prior to reaching the group decision. At this point ask: What do we need to know before we can make a good decision?, What are the issues we need to discuss before we can answer the single question we have agreed on? And How can we be guided by as many facts as possible rather than relying solely on our own opinions?
Adapted from <i>When Teams Work Best</i> , LaFasto and Larson, 2001.

Team Leadership

One problem experienced by teams is the lack of leadership. Some teams never move past the stage of a loose aggregation of individuals with the magnetism or commitment that characterize high-performing teams; the lifespan of such a team is likely to be short.³⁵ In such situations, and in others

³⁴ Frank, LaFasto and Carl Larson. *When Teams Work Best: 6000 Team Members and Leaders Tell What It Takes to Succeed* (California: Sage Publications, 2001), p. 84-87.

³⁵ David A. Whetten and Kim S., Cameron, *Developing Management Skills* (Massachusetts: Addison-Wesley, 1998), p. 431.

types of circumstances, a leader can motivate a team and generate support for ideas and program changes.³⁶

A leader charged to accomplish the proposed objectives is considered as a *Transformational Leader*. Tichy and Devanna assert that there are three essential skills a person must possess and/or demonstrate in order to succeed in the transformational leadership role: (1) must recognize the need for revitalization and change of some sort; (2) must create a vision that depicts how things might be different in the future if the change occurs; and (3) must institutionalize change so that it will survive the leader's tenure.³⁷

In addition, effective leaders involve themselves in the process and remain open to suggestions and questions. An effective leader informs and clarifies guidelines, boundaries, and expectations for the team with the intent of helping them understand how they fit in, how much will be required of them, and how much they have trust in the team.³⁸ For example, General Pagonis, Persian Gulf Logistics team leader claimed, "His [team] was soon fully familiar with the plan . . . [had] a joint understanding of what their roles were in the theater . . . [with] clearly expressed goals, and an [understanding of] an imposed time limit to keep them on track."³⁹

Team leadership, although considered common sense, is necessary to discuss, for not everyone has been trained or has had experiences in team building and team interactions. There are some public leaders who are new to the decision-making process and there are seasoned professionals who have not kept abreast of improvements in team building and sustenance. In the wise words of Alexander Dumas, "One's work may be finished someday, but

³⁶ Carl E Larson and Frank M. J. LaFasto, *Teamwork: What Must Go Right/What Can Go Wrong* (California: Sage Publications, 1989), p. 135-136.

³⁷ N. M. Tichy and M. A. Devanna, *The Transformational Leader* (New York: John Wiley, 1986), p.5-6.

³⁸ David A. Whetten and Kim S., Cameron, *Developing Management Skills* (Massachusetts: Addison-Wesley, 1998), p. 432.

³⁹ *Ibid.*

one's education . . . never!" This philosophy applies to state administrators as well. One can always continue to learn, especially when it pertains to skills necessary to develop and to provide quality service to the public.

The questions to explored in the following chapters are:

- Who are the typical the decision-makers organizing the planning and implementation of an e-government system
- Is there a standard process?

Chapter 3. TexasOnline – State of Texas Model E-Government System

E-Government in the State of Texas — TexasOnline

The focus and core component of this report is the seamless e-government system in the State of Texas—TexasOnline. The primary goal of this system is to bring state online applications together to form a seamless government system. Additionally, some objectives for this system are a focus government to citizen interaction to improve provision of (1) information, (2) services, and (3) benefits. In order to achieve that goal, strong executive leadership and teamwork are essential.

Most often when developing e-government for state-level operations, the governor is the leader. It is important to establish this leadership from the onset. Such a transformational leader can create a policy that can override parochial mindsets and legitimize and create a certain safety net beneath the risk-taking that is an inherent part of any e-government project.⁴⁰ The component of team involvement and cohesion must be emphasized, as discussed in Chapter 2.

According to LaFasto and Larson⁴¹, there are five factors that contribute to successful team endeavors:

- Team Members
- Team Relationships
- Team Problem-solving
- Team Leadership

⁴⁰ National Electronic Commerce Coordinating Committee, *Enterprise Electronic Government: E2 Gov*, (December 10, 2001). Online. Available: <http://www.ec3.org>. Accessed: January 7, 2002.

⁴¹ Frank, LaFasto and Carl Larson. *When Teams Work Best: 6000 Team Members and Leaders Tell What It Takes to Succeed* (California: Sage Publications, 2001), p. xi-xii.

- **Organization Environment**

The State of Texas set the foundation by receiving support and leadership from former Governor George W. Bush and transcended to current Governor Rick Perry. In addition, the objectives set for the development and implementation of an online government system was achieved by incorporating the five factors of successful teams. The following sections illustrate the incorporation of the aforementioned principles necessary for e-government success.

Executive Leadership: Change-Agent, Vision, and Support

The State of Texas is one of the premier states to view a comprehensive best-practices model for planning and implementing an e-government system. That premier system is TexasOnline. Then Governor George W. Bush contended “TexasOnline will enhance Texas government by making it more accessible, efficient, and responsive to all Texans.”⁴²

The vision for TexasOnline was to provide a single point of contact for anyone, anywhere to access information and/or e-government services available in Texas at anytime. TexasOnline is a long-term structure designed to deliver the levels of access required by citizens of the new, electronic economy, coupled with the technology framework that can be of great assistance to state agencies and other governmental entities with limited budgets or with a lack of properly trained information resource staff members.⁴³

Then Lieutenant Governor Rick Perry commissioned an Advisory Council on the Digital Economy, and one of the first steps of that plan was to

⁴² TexasOnline. Online. Available: <http://www.texasonline.com>. Accessed: September 8, 2001.

⁴³ State of Texas, Department of Information Resources, Electronic Government Task Force, *TexasOnline: A Feasibility Report on Electronic Government*, (November 1, 2000). Online. Available: <http://www.dir.state.tx.us/egov/report/finalrpt.htm>. Accessed: May 28, 2001.

create a forum for bringing high tech leaders together with the public sector. In order to establish a solid foundation and structure to build a healthy organizational environment for technological initiatives to thrive, he proposed the appointment of a State Technology Commissioner and a State Technology Council.⁴⁴

Legislative Leadership Role

TexasOnline was established under the guidance and direction of the Texas State Legislature and Governor's Office through Senate Bill 974, 76th Regular Session. TexasOnline demonstrates conclusively that the Internet can be used to:⁴⁵

- Send documents to members of the public and persons who are regulated by a state agency or local government;
- Receive applications for licenses and permits and receive documents for filing from members of the public and persons who are regulated by a state agency or local government that, when a signature is necessary, can be electronically signed by the member of the public or regulated person; and
- Receive required payments from members of the public and persons who are regulated by a state agency or local government.

Team Work: Team Players – Decision-makers

In order to create a sustainable technological infrastructure for the development of the TexasOnline e-government system, a Task Force was

⁴⁴ The full report, background materials and links to additional information can be found at <http://www.txdigecon.bus.utexas.edu>.

⁴⁵ State of Texas, Department of Information Resources, Electronic Government Task Force, *TexasOnline: A Feasibility Report on Electronic Government* (online).

appointed by the Governor. In accordance with Senate Bill 974, the Task Force must be composed of a representative of each of the following state offices and agencies:⁴⁶

- the secretary of state
- the comptroller
- the Texas Department of Economic Development
- the General Services Commission
- the Texas Natural Resource Conservation Commission
- the Texas Department of Insurance
- the Public Utility Commission of Texas

Team Members, Team Relationships, Team Problem-Solving, Team Leadership

Each Task Force member provided pragmatic and constructive information to facilitate the development of a seamless e-government system. The Department of Information Resources (DIR) staff played a key role in planning and implementing TexasOnline. DIR was tasked with the responsibility to conduct research, gather information from public and private sector sources nationwide and abroad, then present the key points to the Task Force. Also, the Program Management Office (PMO) was created to direct and facilitate the implementation of selected (i.e. not all) electronic government projects.⁴⁷ The PMO also established standard business practices and standards for implementing selected electronic government projects.⁴⁸

⁴⁶ Texas Senate Bill 974, 76th Legislature, regular session (2000).

⁴⁷ Telephone and email interview with Phil Barrett, Director, E-Business, Technology Research and Agency Assistance, Department of Information Resources, Austin, Texas, February 2, 2002 and March 7, 2002.

⁴⁸ Barrett Interview.

Finally, there is the Enterprise Operations Division (EOD), according to a recent discussion with a director within DIR:

provides the strategic and policy direction for implementation and management of technology in the state. One of the division's core activities is development of the State Strategic Plan for Information Resources Management. Through the State Strategic Plan, DIR establishes a common direction for all state agencies and universities to follow concerning the implementation of technology, thus promoting coordination and eliminating redundancy. Other core activities include assessing statewide online security, evaluating the state's progress in information technology (IT), researching and reviewing technology policies and trends and developing IT policies and standards, identifying available IT training for agencies' information resources managers, and providing assistance to agencies with IT issues.⁴⁹

Furthermore, it was determined that the Task Force, collaborating with DIR, must complete a Demonstration Project as a “proof of concept”⁵⁰ for electronic government and report on the results no later than November 1, 2000, before full implementation of TexasOnline.⁵¹

Since participation in the Demonstration Project was voluntary, the process to assemble agency representatives was cumbersome. Subcommittee members had to contact agencies and identify any potential government services that could be featured on the portal.

Government Stakeholder Buy-In

It is important that all parties are assured that the development of cross-boundary cooperation does not translate into a loss of autonomy, which

⁴⁹ Ibid.

⁵⁰ It is the author's supposition that the legislature included this contingency as a safeguard to ensure that TexasOnline would have all of the technological glitches removed before presenting the portal to the nation.

⁵¹ Texas Senate Bill 974, 76th Legislature, regular session (2000).

is a concern of many government officials.⁵² A director with the Office of Budget and Planning, State of Texas, Electronic Grants Technological Workgroup (EGTAW) expressed one of the major barriers experienced in developing an online grants system is the reluctance to relinquish ownership of an agency's particular agency culture, image, and method of operation.⁵³ The director attributed the lack of a state mandate as partially attributable to this issue.⁵⁴

The TexasOnline planning team took the necessary steps to seek and recruit stakeholders who would be of most benefit and contribute favorably to the project. The initial six state agencies to buy-in and participate in the project were

- Office of the Comptroller of Public Accounts (CPA)
- Texas Railroad Commission (RRC)
- Texas Real Estate Commission (TREC)
- Texas Department of Licensing and Regulation (TDLR)
- Texas Department of Insurance (TDI)
- Texas Natural Resource Conservation Commission (TNRCC)

As with any other pioneering project, once it showed signs of being successful then others chose to participate. Subsequently, interest to participate in the project increased considerably among other state agencies to include the Texas Department of Transportation (TxDOT) and the Texas Department of Public Safety (DPS).

⁵² National Electronic Commerce Coordinating Committee, *Enterprise Electronic Government: E2 Gov.* (online).

⁵³ Interview with Denise Stines Francis, Director, State Grants, Office of Budget and Planning, Office of the Governor, Austin, Texas, November 14, 2001.

⁵⁴ Stines Francis Interview.

Team Planning Strategies and Methods: Research and Inquiry

The Task Force and subcommittees conducted a wide range of public hearings and participated in electronic government forums and briefings in order to gain a broad understanding of the issues and challenges of establishing a single point of Internet entry for Texas government services.⁵⁵ The Task Force also conducted focus group sessions and administered surveys to obtain input from community members, business-owners, state and local government agencies in the State of Texas, as well as other states.

According to a recent NECCC report, strong coalitions can validate projects more widely, both across governmental lines and in the public.⁵⁶ In addition, such collaborations can build reassurances that it is not about the ability to usurp power, but it is an effort to make the ability of service provision easier and more effective than certain person-to-person transactions(i.e., renewing a driver's license).

The State of Texas demonstrated the action of coalition building when DIR and Task Force members met with agency representatives to identify government processes that could be used to demonstrate the viability of the electronic government concept in an effort to establish the demonstration project.

The Task Force reviewed results of the surveys and remained open to other input, all while the conceptual framework of TexasOnline was beginning to take form. After analysis of the surveys, focus groups and other research techniques the Task Force realized the necessity of establishing a viable infrastructure for TexasOnline, as well as other technical components that would support similar electronic government initiatives. The next step

⁵⁵ The list of persons testifying before the Strategic Issues Subcommittee is provided in [Appendix B](#), TexasOnline Feasibility Report on Electronic Government.

⁵⁶ National Electronic Commerce Coordinating Council Symposium White Paper, Released December 10, 2001, NECCC Annual Conference.

toward establishing TexasOnline was to use a competitive procurement process to choose for implementation. KPMG won the bid process. The equipment and software supporting TexasOnline are installed at the West Texas Disaster Recovery and Operations Center (WTDROC) and are operated under the oversight of DIR by the WTDROC contractor, Northrup Grumman and KPMG Consulting. Finally, TexasOnline became operational in August of 2000.⁵⁷

Organization Environment – Establishing Standardization

Public leaders that plan e-government systems are aware that enterprise-wide standards assist with creating a solid infrastructure to support and sustain an effective seamless government system. The TexasOnline planners are no different and in an effort to develop standardization of all states e-government initiatives the National Electronic Commerce Coordinating Council (NECCC) has created five levels of e-government portals (See Table 3.1):⁵⁸

**Table 3.1
National Electronic Commerce Coordinating Council
(NECCC)
Five Levels of E-Government Portals**

Portal	Description
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⁵⁷ State of Texas, Department of Information Resources, Electronic Government Task Force, *TexasOnline: A Feasibility Report on Electronic Government*. (online).

⁵⁸ National Electronic Commerce Coordinating Council website. Online. Available: <http://www.ec3.org/>. Accessed: January 10, 2002.

Type	
First Level	Delivers information in a way that is easy to use so citizens can find the information they need quickly. The NECCC estimated that most governments are already at level one or are taking steps to reach level one soon.
Second Level	Citizens and businesses can perform simple transactions such as requesting a form or paying a parking ticket online. Because the Internet is so new, there is only a small selection of services available online through government portals at this level. The NECCC estimates that 15 to 20 percent of governments will at this level by the end of 2000.
Third Level	Provides seamless access to a multitude of public services, requiring collaboration among organizations, and allowing the public to move between government transactions without re-entering information such as individual identification. The NECCC predicts that some government entities may be able to realize this level by 2001.
Fourth Level	Draws the information needed for transactions from existing government sources, requiring that most of the government's databases become interactive and interface with each other. On a fourth level portal, for example, citizens can change their address with all relevant government organizations with a single entry of the new information.
Fifth Level	Provides intricate personalization for citizens and businesses by customizing the subject areas of interest to the specific needs of the consumer. These subject areas are called "channels" or "life events." For example, a "car channel" might provide individuals with ready access to car registration, their history of traffic citations, their insurance company's rating, and recall notices on their cars. Furthermore, the portals of this level can assume an active role, by contacting individuals via pager, cell phone, or e-mail to provide updates on street or freeway conditions or reminders to update car registration. According to the NECCC, fifth level portals are not expected until 2002 or 2003.
Adapted from National Electronic Commerce Coordinating Council	

Security and Privacy Issues

State government agencies have the challenge of convincing the public that their online activities and transactions will remain private and secure. Many citizens distrust the government's ability to ensure privacy and security via e-government service delivery. The distrust is not without merit. For example, a woman's social security number was stolen and used to obtain a

state driver's license, insurance, and three cars.⁵⁹ Because of that unfortunate incident, the woman now refuses to make any reservations or [transactions] requiring a credit card or give away other personal information over the Internet.

Texas already has an information practices system that provides privacy protection for personal information. Still many citizens are not pleased that personal information is typically sold to the highest bidder by private companies, and that government agencies also share this personal information without permission of the individual. According to a Texas citizen⁶⁰ survey, paying for e-government services through the sale of personal data is unacceptable.

TexasOnline set in place a solid foundation for electronic government and offers a fully secure, efficient environment for electronic service delivery. For instance, security mechanisms such as software packages, firewalls, and intrusion detection systems are available to provide greater security.⁶¹ However, more must be done to ensure that citizens' personal information is protected.

After going through the many phases of effectual team building, the next important decision in this process is deciding what are the costs and anticipated benefits of implementing a seamless system. There are various economic models to choose from. The following section investigates the answers to these questions: What resources are available for investing in the project? Who is making the investment decisions and how (collaborative teamwork and problem solving)?

⁵⁹ Vanessa Castillo Mitra, "For The Public's Eye's Only: Who Has the Right to Know?" (Professional Report, Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, 2001), p. 1.

⁶⁰ State of Texas, Department of Information Resources, Electronic Government Task Force, *TexasOnline: A Feasibility Report on Electronic Government*, (online).

⁶¹ *Ibid.*

Anticipated Fiscal/Economic Impacts or Benefits of E-Government

The public sector, similar to big business, must evaluate the costs and benefits of any program implementation. However, unlike the private sector the government does not have the component of constant competition to consider. Nonetheless, public officials must be able to justify the economic and/or human benefits of any investment. Most decision-makers perform a cost-benefit analysis to achieve that objective. The cost-benefit analysis provides a way of organizing information about a program under consideration so that priorities may be reasonably established.⁶²

Given that a cost-benefit analysis is beyond the scope of this report, the presentation of the State of Texas, E-Government Survey of State Agencies, Boards and Commissions will be sufficient. A survey was conducted and data was collected from state agencies about how they perceived possible benefits and/or drawbacks that may occur with the use of e-government. One-hundred fifty six (156) surveys were administered and the following excerpts of the research findings and Task Force recommendations follow (See Tables 3.2 and 3.3):⁶³

⁶² John Mikesell, *Fiscal Administration: Analysis and Applications for the Public Sector* (Fort Worth: Harcourt Brace College Publishing, 1999), p. 244.

⁶³ Findings and Recommendations, E-Government Survey of State Agencies, Boards, and Commissions. Online, Available: http://www.dir.state.tx.us/egov/Surveys/Agency_Survey/Report_Body. Accessed: December 14, 2001.

Expected Benefits

Table 3.2
Increased Efficiency

Expected Benefit	Research Findings	Recommendation
Increased efficiency of government services	Overall, agencies did not perceive cost reductions as a significant benefit to online government. As a whole, agencies ranked reducing costs as the fifth most significant benefit to the state. Medium and small agencies and universities also ranked this as fifth. Large agencies ranked cost reductions as the fourth most significant benefit to the state.	The state should study and educate agencies on additional benefits of online government such as productivity increases and cost reductions.
Adapted from Findings and Recommendations, Survey Report, State of Texas, Online. http://www.dir.state.tx.us/egov/Surveys/Agency_Survey/Report . Accessed: December 2, 2001		

Table 3.3
Reductions and Increases

Expected Benefit	Recommendation
Reduce transactional costs Reduce postal costs Reduce paper expenses Reduce costs of handling checks; and Increase revenue-generating potential for the agency	As part of a benchmarking exercise to determine benefits of e-government, agencies should monitor the costs associated with the top three benefits that the agencies expected would be beneficial. Comparison cost-benefit analysis would provide the state with more in-depth data.
Adapted from Findings and Recommendations, Survey Report, State of Texas, Online. http://www.dir.state.tx.us/egov/Surveys/Agency_Survey/Report . Accessed: December 2, 2001	

Anticipated Impacts

The survey revealed that there would be costs incurred to process particular services online, such as licenses and permits. Below are specific

findings for State of Texas agencies and how e-government service cost is possibly affecting state-level agencies (See Table 3.4):⁶⁴

**Table 3.4
Anticipated Impacts Results**

Anticipated Impact	Research Findings	Recommendation
Transaction Revenues and Costs	The range of estimated annual revenue streams for agencies from license/permit applications varies from \$82,000 to \$77.2 million. Very few agencies have conducted a formal study to determine the cost to process an application - only five agencies said that they had. Agencies may also have more informal means of assessing their costs. Formal quantification of these costs will be helpful in identifying the benefits of offering services online. ⁶⁵	Develop a common methodology for agencies to use in assessing costs and benefits, and educate agencies on the use of the methodology and the benefits that result from measuring costs-benefits. ⁶⁶
Adapted from Findings and Recommendations, Survey Report, State of Texas, Online. http://www.dir.state.tx.us/egov/Surveys/Agency_Survey/Report . Accessed: December 2, 2001		

The State of Texas survey findings revealed expected benefits, drawbacks, and transaction costs. Still, the question of who will provide the funding for e-government programs must be answered.

Primary Funders – Secondary Decisions

The federal government, in the form of grants, is still a primary source e-government financing. Once the federal government allocates and distributes the funds to each state, it is the responsibility of each state public leader to decide how that funding will be spent and how it will be distributed. One question is, who or which agency administration has investment resource decision-making authority?

⁶⁴ Findings and Recommendations, E-Government Survey of State Agencies, Boards, and Commissions. (online).

⁶⁵ Ibid.

⁶⁶ Ibid.

In the State of Texas, as of September 1999, DIR no longer provides oversight approval of agency biennial operating plans for the implementation of information technology (IT) projects.⁶⁷ Generally, agencies request resources for state projects in their legislative appropriations requests, and receive approval from the Legislative Budget Board (LBB) to expend funds on IT projects in their biennial operating plans.⁶⁸ The PMO does have the authority to identify resources necessary and opportunities among multiple state agencies for coordinating projects across agencies.⁶⁹

Embedded within the issue of costs and funding concerns is the matter of enterprise coordination among state agencies. A report prepared by Texas Comptroller, Carol Keaton Rylander, offered a proposal that combines costs-benefits and coordination of state agency technology projects, which would allow agencies to move up to fifty percent (50%) of their appropriations across budget lines for information technology projects identified to contain coordinating plans.⁷⁰ This proposal takes the form of a creative source of funding technology initiatives and includes the component of encouraging enterprise-wide coordination necessary for an efficient and productive e-government system.

State of Texas – TexasOnline: Access Issues and the Digital Divide

The Task Force responsible for the planning and implementation of the TexasOnline e-government system admits that the portal will not achieve its goal of providing online service to all Texans, if access to the service is not available to all citizens. The state must take an active role in providing the

⁶⁷ Barrett Interview.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Texas Comptroller of Public Accounts, *e-Texas: Smaller, Smarter, Faster Government*. Online. Available: <http://e-texas.org>. Accessed: June 7, 2001.

necessary infrastructure in Texas communities, making services available to citizens using a variety of telecommunications devices and implementing services to citizens with [special needs] (i.e., disabled).⁷¹

After the Task Force conducted its research, they found that there are four major barriers to Internet access: Geographic, Economic, Language, and Disability barriers.⁷² In addition to that, they acknowledged the large agricultural component embedded in this issue and discussed the poor telecommunications infrastructure that exists in the rural communities.

Rather than merely repeat the statistics found by the Task Force, this report focuses on the actions or non-actions by state administrators and legislators following the Task Force's recommendations, which are listed in their Feasibility Report. (See Table 3.5).⁷³

⁷¹ State of Texas, Department of Information Resources, *Electronic Government Strategic Plan*. (January 2001). Online. Available:

<http://www.dir.state.tx.us/egov/2001plan/egovplan.htm>. Accessed: October 5, 2001.

⁷² State of Texas, Department of Information Resources, *TexasOnline: A Feasibility Report on Electronic Government, Electronic Government Task Force*. (online).

⁷³ Ibid.

Geographic Barriers

Table 3.5
Geographic Barriers

Task Force Recommendations	Follow-Up Action or Non-Action
(LEG) The Texas Legislature should extend the incentive regulation rates for electing telecommunications companies under House Bill 2128 (74th Legislature).	<i>The Legislature did not adopt this recommendation</i>
(LEG) Offer tax incentives to companies and research and development firms that develop and implement new and innovative technologies and devices.	<i>The Legislature did not adopt this recommendation</i>
(STATE) Promote opportunities to leverage rural telecommunications volume to reduce costs of providing services to those communities.	<i>Ongoing*</i>
(TF) Develop policies and procedures for government entities when participating in TexasOnline.	<i>Ongoing</i>
Adapted from TexasOnline: A Feasibility Report on Electronic Government	

Economic Barriers

An array of economic barriers may impede the success of the portal. The following are possible solutions that may curtail or eliminate these barriers (See Table 3.6):⁷⁴

Table 3.6
Economic Barriers

Task Force Recommendations	Follow-Up Action or Non-Action
(LEG) Offer tax incentives to businesses that donate Internet-ready computer equipment, training, or discounted/free broadband access lines to schools, libraries, and other public entities.	<i>The Legislature did not adopt this recommendation</i>

Legislature
Barrett Interview.
Ibid.
Ibid.
Task Force
Barrett Interview.

⁷⁴ State of Texas, Department of Information Resources, *TexasOnline: A Feasibility Report on Electronic Government, Electronic Government Task Force. (online)*.
Barrett Interview.

Task Force Recommendations	Follow-Up Action or Non-Action
(TF) Collaborate with a private financial services firm for a credit/debit card program. Allow those without credit cards access to the portal.[can be marketing mechanism for the state]	<i>Ongoing*</i> - Working with 7-11 Stores; installation of new cash card kiosks
(TF) Provide other methods of online payment for those online portal applications that only accept credit cards.	<i>Ongoing*</i> - Now offering the option of submitting electronic checks.
Adapted from TexasOnline: A Feasibility Report on Electronic Government	

Language Barriers

The following are possible solutions to address language barriers with respect to the portal (See Table 3.7):⁷⁵

Table 3.7
Language Barriers

Task Force Recommendations	Follow-Up Action or Non-Action
(TF) Explore the opportunity to use the portal as a gateway to Latin America. Texans can use the portal to access necessary business information, while Latin Americans can use it to access Texas business regulations and tourism information.	<i>Ongoing*</i> - however still needs more attention and skilled professionals in this area. As recently as March 2002, received feedback from LBJ Graduate student, Andres Mutis, regarding ensuring the Spanish translations were accurate-his feedback was implemented.*
(TF) Require participating TexasOnline government entities to be sensitive to special language, visual appearance, and navigational demands of their customers and to accommodate citizens' needs as they arise.	<i>Ongoing*</i> - Have implemented American Disabilities Act (ADA) compliance.
Adapted from TexasOnline: A Feasibility Report on Electronic Government	

Ibid.

Ibid.

⁷⁵ State of Texas, Department of Information Resources, *TexasOnline: A Feasibility Report on Electronic Government, Electronic Government Task Force.* (online).

Barrett Interview.

⁺ Based on brief conversation with Andres Mutis, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, Graduate student, March 2002.

Barrett interview.

Disability Barriers

Making the portal accessible to people with disabilities is difficult, but necessary. (See Table 3.8):⁷⁶

Table 3.8
Disability Barriers

Task Force Recommendations	Follow-Up Action or Non-Action
(TF) Develop policies and procedures for government entities when participating in TexasOnline , including abiding by DIR rules on designing state Web sites.	<i>Ongoing⁷⁶ - SB187 gives authority to Task Force and DIR to develop policies</i>
(TF) Include an instructional page for users with disabilities through a link on the home page. Include a list of access keys that users can utilize to navigate the site on this page.	<i>unknown</i>
(TF) Provide contact information in the case that users encounter barriers to accessing any or all of the portal.	<i>unknown</i>
(TF) Have participating TexasOnline applications tested by a variety of Texans with and without disabilities.	<i>unknown</i>
(TF) Direct government entities participating in the portal to online disability accessibility testing programs.	<i>unknown</i>
(TF) Establish an Integrated Voice Response system (IVR) or alternate technical solutions.	<i>Ongoing⁷⁶ - Have started a pilot project - driver's licenses.</i>
Adapted from TexasOnline: A Feasibility Report on Electronic Government	

As a testament to Texas' efforts to make e-government accessible to all citizens, it was awarded the 2000 Accessibility 2000 Recognition Award for Outstanding Achievement in the Field of Information Technology from the National Association of State Information Resource Executives (NASIRE).⁷⁷ Because Texas has shown leadership in making information technology

⁷⁶ State of Texas, Department of Information Resources, *TexasOnline: A Feasibility Report on Electronic Government, Electronic Government Task Force.* (online).

Barrett Interview.

Ibid.

⁷⁷ This award recognized that Texas has exhibited leadership in the area of program development for e-government initiatives, which ensure the expansion of Internet access to and use of information technology for all Texans.

accessible, it should continue to improve accessibility by tackling other barriers.⁷⁸ Additionally, Governor Perry is continuing his support for technological efforts in government service-delivery by assuring that one of his one of his policy objectives is technology.

According to a representative of the Texas Education Agency (TEA), this state agency is taking steps to bridge the gap of access in the community through educational institutions. The TEA representative claimed, “Our Texas Essential Knowledge and Skills (TEKS) initiative is a grassroots program that involves every grade level and subject.”⁷⁹ Furthermore, “The agency recognizes that technology fluency is necessary, academically and educationally, for all citizens,”⁸⁰ and “. . . rather than create separate technology classes, its woven throughout various subjects and the schools have the choice to select technology access, for example in the library, or in the classroom . . .”⁸¹

After the in depth discussion with the TEA representative I viewed the agency’s website. One of the other important programs that addresses improving access to all citizens is the Education Service Centers (ESC). The centers are located throughout the State of Texas. They are connected to a variation of educational institutions. For instance, Region XIII serves 16 counties, 59 school districts, 16 charter schools, 40 private schools, and 8 institutions of higher learning.⁸² According to the TEA representative interviewed, “There are 20 education service centers, divided into 20

⁷⁸ Internet Access Issues Involved in Electronic Government, White Paper, Electronic Government Task Force: Issues Subcommittee
By the Department of Information Resources
August 2000.

⁷⁹ Telephone Interview with Kate Loughrey, Texas Education Agency, Austin, Texas, February 27, 2002.

⁸⁰ Loughrey Interview.

⁸¹ Ibid.

⁸² Please refer to TEA’s, Educational Technology webpage located at <http://www.tea.state.tx.us/technology/> for other regions.

geographic areas, each one services its respective areas, . . . they are not the same, because each area [has different needs] and different technology administrators.”⁸³ The one critique of the site was that in order to find Region XIII, I had to play hit and miss. The region map, which is shaped in the State of Texas, just has numbers on each region and does not clearly denote the region or its contents.

Stakeholders

To reiterate another point from Chapter 2, stakeholders are an important factor in addressing the accessibility issue. According to an interview with a DIR director:

most IT organizations develop and implement IT systems using structured methodologies for the project management and software development life cycles (PMLC and SDLC respectively). As part of software engineering, users should be involved in all parts of the SDLC. Their involvement is critical at the beginning of the project to ensure that their needs will be met by the proposed system; during the requirements analysis to clearly define their needs; during the analysis and design phase to ensure the system is being designed to their specifications and appropriate user documentation is developed; in the implementation and testing phases – again to ensure the systems is developed to their specification; during the deployment phase when the system is “rolled out” to the users, and during the maintenance phase since they are the ones using the system. The definition of a successful project is one that is on time, on budget, and meets the requirements of the users. If it does not meet the users needs, the users will not use the system, and the system could be scrapped entirely. User requirements must be identified as early as possible in the development of a project.⁸⁴

⁸³ Loughrey Interview.

⁸⁴ Barrett Interview.

Lessons Learned from the Demonstration Project and Task Force

The process of planning the seamless system included team building, resource allocation decisions, content choices, and more. Ultimately, the demonstration project was finalized. The following are useful “lessons learned” during the decision-making process.

According to the TexasOnline: A Feasibility Report on Electronic Government, the lessons learned during the planning and implementation phases of the seamless government system include (See Table 3.9):⁸⁵

**Table 3.9
Lessons Learned – TexasOnline Task Force**

1.	On-going governance of the portal will be critical to ensure consistency, security, and efficiency.
2.	Coordination and communication among agencies and across levels of government will be essential to realize the full potential of the portal to break down barriers to efficient government services.
3.	Using credit cards will be new to many agencies, and their use will require changes in current fee structures. Agencies may not have the authority and flexibility to address credit card fees within the current authorizing legislation
4.	Fees related to accepting payment over the Internet will include charges such as sales tax (in some cases) and electronic funds transfer costs. Agencies and local governments will need authority to address these additional costs in an appropriate manner.
5.	While a number of information services can be provided through the portal at no charge to the public or businesses, increased use of TexasOnline to complete financial transactions will be essential to the economic viability of the portal.
6.	Security standards must be enforced for all state and local entities that provide services through the portal.
7.	Agencies' current rules and policies may limit their ability to bring their services onto the Internet, and in many cases, small changes to eliminate these barriers will suffice.
8.	The public's growing concern for privacy must be addressed to increase use of the portal and improve responsiveness of government.
9.	The use of digital signatures to authorize transactions over the Internet is a complicated issue. Government entities will need to review their policies and statutes to determine what is allowed and what changes will need to be made in bringing their public services to the Internet.
10.	Single face of government will have to be balanced with the advantages of recognizing the individuality of the respective local jurisdictions and state agencies.
11.	Limited resources will require government to prioritize services that can be provided on

⁸⁵ State of Texas, Department of Information Resources, Electronic Government Task Force, *TexasOnline: A Feasibility Report on Electronic Government* (online).

the Internet , and to develop plans for bringing the services online.
12. Outreach is necessary for both the providers of electronic government services and the citizens and businesses that use them. Government entities will need to be educated and trained on how they can best use TexasOnline to serve their constituents. Citizens will need to be informed on the services available through TexasOnline, and must be educated on how to use the portal to access those services.
Adapted from TexasOnline: A Feasibility Report on Electronic Government

Recommendations from the Task Force–TexasOnline

The Task Force found five overarching, critical issues that are essential to the long-term success of TexasOnline and electronic government (See Table 3.10):⁸⁶

Table 3.10
Task Force Recommendations for TexasOnline

<ul style="list-style-type: none"> • The Legislature should establish a governing body to oversee the implementation, expansion and operation of the portal. This governing body should represent all of Texas and be empowered to set direction and priorities for improvement and expansion of TexasOnline.
<ul style="list-style-type: none"> • The Legislature should establish a Portal Management Office at DIR to provide staff support for the governing body and to provide for day-to-day management of the portal.
<ul style="list-style-type: none"> • The Legislature should provide guidance that each state agency must consider the portal for all Web applications that include financial exchanges, “electronic signatures,” or stringent security requirements.
<ul style="list-style-type: none"> • The Legislature should consider establishing a privacy commission that is authorized to address the growing concerns of both the public and businesses for protection of sensitive information collected by governmental entities that may be shared across the Internet.
<ul style="list-style-type: none"> • State revenue realized from TexasOnline should be designated for operation and maintenance of the portal and to assist in bringing other government entities onto the portal.
Adapted from TexasOnline: A Feasibility Report on Electronic Government

Task Force Feedback on Recommendations

A DIR director explained, “Since agencies receive the funding for IT projects, each agency makes the decision on how resources will be allocated to those projects.”⁸⁷ The interview with the same director further revealed that, “. . . the agencies provide these resources through internal staff or by

⁸⁶ Ibid.

⁸⁷ Barrett Interview.

contracting with outside vendors. For systems that will be accessed through TexasOnline, an agency can develop and implement the system using internal staff. By contracting with outside vendors or by contracting with the state's TexasOnline partner, KPMG, can help to develop the system.”⁸⁸

Other State of Texas Online Initiatives

Electronic Grants Technical Workgroup (EGTAW)

Based on a recent discussion⁸⁹ with a director associated with leading EGTAW group, the Texas Records and Information Locator (TRAIL) has signed on to design a mock-up search engine to pull information from a database (keyword); similar to the Catalog of Federal Domestic Assistance (CFDA) searchable database. The director was confident in expressing the receipt of buy-in from all agencies on that concept, which is notable because it is not mandatory for any state agencies to become involved with any online service delivery initiatives; however, the TRAIL system must be used statutorily for any state technology program. A logo is in the process of development for “branding” their system.

The director also shared a problem-solving experience. EGTAW's participating agencies were debating whether to post information on their specific agency funding pages regarding their formula grants. The outcome:

- Proponents for posting – will inform constituents of funds available to their particular area and can follow up with state agency representatives for proper procedures.
- Opponents for posting – since some agency's grant formulas do not apply to all resource seekers, as with other competitive

⁸⁸ Ibid.

⁸⁹ Stines Francis Interview.

funding source requirements, these agencies will choose not to post that information.

In addition, EGTAW will create a user book for each participating agency to assure standardization of information entered by each agency.⁹⁰

The following chapter will describe case studies of best practices in planning and implement of e-government initiatives in the states of Washington, Minnesota, and Iowa.

⁹⁰ Ibid.

Chapter 4. Content Analysis: Compare and Contrast of Other State E-Government Case Studies with State of Texas: Washington, Minnesota and Iowa

This chapter describes case studies of best practice e-government initiatives in the states of Washington, Minnesota, and Iowa. In addition, it includes content analysis by comparing and contrasting the planning and implementing processes of these states with the State of Texas.

Washington Case Study

The State of Washington exemplifies a best-practices model for planning and implementing an e-government system. The Washington State Digital Government Plan won the State Planning and Management Initiatives NASCIO⁹¹ Award 2001. As a result of the digital plan a single point of entry portal called, “Access Washington” was created.

The portal is the gateway to digital government services for businesses and citizens. It leverages the state's advanced-technology infrastructure and provides easy-to-use information and services, 24 hours a day, seven days a week.⁹²

Another unique characteristic that exists in the State of Washington is the Digital Governance Plan that treats the state, with all its various components,

⁹¹ NASCIO represents state chief information officers and information resource executives and managers from the 50 states, six U. S. territories, and the District of Columbia. State members are senior officials from any of the three branches of state government who have executive-level and statewide responsibility for information resource management. Representatives from federal, municipal, and international governments and state officials who are involved in information resource management but do not have chief responsibility for that function participate in the organization as associate members. Private-sector firms and non-profit organizations may join as corporate members.

<https://www.nascio.org/awards/index.cfm>

⁹² Access Washington, Digital Government Plan

as a single enterprise, and follows a "build it once" strategy in which agencies avoid duplication of effort, adhere to common standards, and use a common infrastructure to serve citizens in a seamless way.⁹³

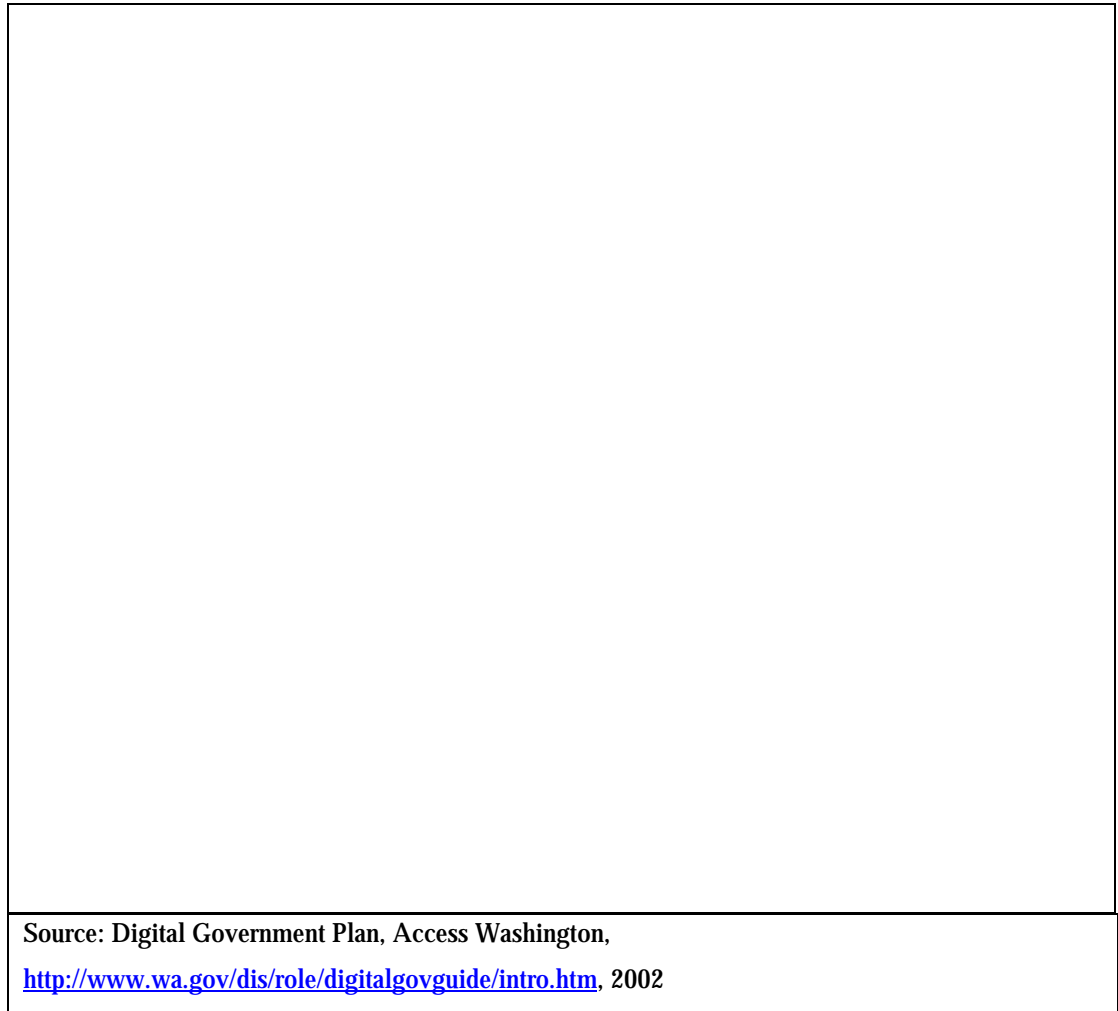
Implementing the Digital Government Plan

One of the most important phases in the State of Washington's Digital Plan is to integrate the development of several of the Internet applications, all of the infrastructure, and all of the governing policies in a manner that allows the three components to intercept and exert their influence on each other. In order to achieve optimal development of digital government, there has to be an identification and coordination of the critical components in each of the three areas. The intercepts are those points where accomplishment of one component is dependent on, or drives accomplishment of another component. Ultimately, these three components will rest one upon the other in an interlocking hierarchy that provides structure for the state's digital government efforts.⁹⁴ (See Figure 1)

⁹³ Washington is creating an infrastructure for digital government by using an approach that treats the state as a single enterprise. The single enterprise concept includes the computer networks and applications that span multiple agencies, the K-20 institutions, the judicial and legislative branches, and local and federal entities. It also includes the governance, development, and maintenance of these networks. This enterprise approach strategically plans and implements the synchronization of multiple Internet applications that run on the number of infrastructure components which are necessary to deliver digital government services to the citizen.

⁹⁴ Within the enterprise, there are three major interdependent components required to build digital government: Internet applications, infrastructure, and policy development. See: Access Washington, Digital Government Plan, <http://www.wa.gov/dis/role/digitalgovguide/intro.htm>

Figure 1
Interlocking Hierarchy



Privacy and Security Issues

The State of Washington addresses three key points regarding privacy and security:

Secure Access Service

Authorized customers can access protected data through a secure path over the Internet to information within the firewalls. Agencies providing Internet applications decide who uses that path, and how far they can go on it, by issuing the user IDs, passwords, and secure signatures to meet the appropriate level of assurance needed for access.⁹⁵

Security

Statewide security architecture is one of digital government's key elements. A robust, integrated security architecture will enable the registration and authentication of users to individual systems and across systems through a single sign-on to Access Washington, thereby providing different levels of services (and customized services) based on the unique attributes of the user.

In consultation with agencies, and using network security expertise of national stature, the state is working on a statewide enterprise security infrastructure to provide the foundation for secure digital government transactions among the government, its citizens and businesses. Based on the findings of the in-depth identification and review, the Department of Information Services (DIS) is building the state's security architecture.⁹⁶

Secure Signatures

Imagine completing a business agreement—signatures and all—with a personal computer. DIS will soon offer digital signature services that let citizens and businesses securely sign and send electronic documents over the Internet. Contracts, images, letters, and more can be securely signed digitally

⁹⁵ Access Washington, *Digital Government Plan*. Available: <http://www.wa.gov/dis/role/digitalgovguide/intro.htm>. Accessed: February 12, 2002.

⁹⁶ Access Washington, *Digital Government Plan* (online).

and securely sent electronically in a matter of seconds. Beyond documents, secure signatures play an important role in authenticating public employees, citizens, and businesses as users of certain statewide systems.⁹⁷

Washington's Bottom-Up Approach to Developing E-Government

Digital Government Academy

The State of Washington created a mechanism that will build upon the strategic initiatives to build strong, reliable e-government infrastructure and systems from the bottom up. The mechanism is the Digital Government Applications Academy.⁹⁸ A shared learning environment is the nexus of the Digital Government Applications Academy. The Academy's environment is conducive to developing and designing web-based applications created by state agency professionals. In addition, it serves as a mechanism for rapid and replicable development of secure, convenient, and cost effective e-government service delivery.

The State of Washington prefers to establish a core competence within state government professionals to plan, design, and implement e-government system and not engage in outsourcing the entire initiative. The Digital Government Applications Academy assists the State of Washington with accomplishing that objective. For example, the Academy conducted an intense day and a half long course to promote e-government services to government technology and business leaders.⁹⁹ The Academy conducted this

⁹⁷ Ibid.

⁹⁸ The intent is to accelerate digital government development in a collaborative environment. Access Washington.

⁹⁹ Access Washington, *Digital Government Plan* (online).

class based on an overwhelming request from local government leaders to use the Academy's services and involve government agencies with directly impacting the implementation of e-government service delivery systems.

Minnesota Case Study

In 1997, the Legislature in the State of Minnesota designated North Star¹⁰⁰ as the official e-government system, and as the single point of access to government information and services. Currently, the North Star e-government system hosts approximately 100 government agency websites. The Minnesota Office of Technology provides the management of agency online services and the private/public collaboration to ensure that state agencies in Minnesota present a unified e-government system. In addition, the State of Minnesota made it possible for North Star to assure state agencies that they would not have to outsource web services or other related technical services and support. Furthermore, North Star does not exercise command and control over agency websites, but encourages experimentation while emphasizing that sites should have a common look and feel, with the use of templates.

Iowa Case Study

The final example of best practices for planning and implementing an e-government system is the state of Iowa. They developed the Inter-government Information Technology & Telecommunications (IITT) plan. Their mission: "To help government boldly serve as no one has ever served before."¹⁰¹ Lessons learned in Iowa will affect citizens and governments

¹⁰⁰ Tod Newcombe, "If You Build It, Will They Come?" *Govtech.net*, Online. Available: <http://www.govtech.net/magazine/servicecitizen/ifyoubuildit.phtml>. Accessed: June 6, 2001.

¹⁰¹ Ben Grimley, "Service Without Seams." *Govtech.net*, Online. Available: <http://www.govtech.net/magazine/servicecitizen/ifyoubuildit.phtml>. Accessed: June 6, 2001.

across the nation. “ We positioned Iowa as a test bed to try out applications,” explained Henry Lai, director of GSA’s Center for Emerging Technology.

Did Someone Say Task Force?

The Intergovernmental Information Technology & Telecommunications (IITT) Task Force is the guiding entity for this states e-government projects. Ed Stanek, Commissioner of the Iowa Lottery and a veteran in telecommunications planning, chairs the IITT Task Force.¹⁰² The IITT Task Force does include representatives from the federal and local government. The Task Force is largely responsible for developing a plan for governmental use of information technology, and coordination and integration of the activities between stakeholders.

The Task Force will guide the overall planning process. It is responsible for the following roles:¹⁰³

- to prioritize goals and objectives
- to determine and coordinate an overall conceptual framework for the plan
- to integrate work group outcomes into a comprehensive plan

The State of Iowa’s goals were to create a seamless e-government system that is user-friendly, easy to access for citizens and government officials and staff, and is cost effective. The goals are very clear-cut.¹⁰⁴

- Improve citizen interaction with government
- Coordinate state, federal, and local technology planning efforts

¹⁰² Ben Grimley, “Service Without Seams.” (online).

¹⁰³ Intergovernmental Information Technology & Telecommunications Plan, See: <http://www.state.ia.us/government/iitt/index.html>

¹⁰⁴ Intergovernmental Information Technology & Telecommunications Plan (online).

- Create a vision for the intergovernmental use of technology
- Leverage technology to create a seamless, efficient, effective, and responsive government

Opposing Arguments and Thoughts on E-Government Planning and Implementation

Not everyone is singing the praises of e-government. More specifically, not everyone is singing the praises of some public leaders decisions in planning and implementing state-level e-government systems. For example, Richard Varn, Iowa chief information officer argues that e-government should offer citizens better access to their government rather than enabling government agencies to better broadcast their messages.¹⁰⁵ It must be stated though that Mr. Varn is in support of e-government, however he is more of an advocate for quality customer service. Many believe that e-government systems should be planned with the customer in mind; instead of promoting state agency agendas.

In addition to customer service outcries being paramount in e-government decision-making, there are those venting about the partnerships some public leaders are choosing. For example, the State of Pennsylvania's PA PowerPort¹⁰⁶ is under scrutiny for its partnership with Microsoft. Wayne Kessler¹⁰⁷, Adjunct Fellow, The Commonwealth Foundation critically assesses the partner claiming that "Microsoft gets the best available online marketing platform to reach Pennsylvanians; the Administration gets web

¹⁰⁵ Brian Robinson, "A Twist on E-Government), (2002), *FCW.COM*, Online. Available: <http://www.fcw.com>. Accessed: March 4, 2002.

¹⁰⁶ State of Pennsylvania's, State-Wide, Single Point Access Portal, See: <http://www.state.pa.us/PAPower/>.

¹⁰⁷ Wayne Kessler is also President of Kessler Freedman Web Development Services.

software development – some of it off the shelf.”¹⁰⁸ Mr. Kessler goes on to mention further that there are many links to Microsoft services on the site, and questions whether that is Pennsylvania’s public leaders vision of e-government. In addition, there has been much speculation about the donation of \$100,000.00 worth of consulting services to include the responsibility of the PA Powerport site framework – the first such agreement for Microsoft.¹⁰⁹

Some other concerns have been raised regarding PA Powerport. The site is broad in coverage of services, and many feel it is a benefit. Conversely, there are those who claim the broad PA Powerport site may be confusing to potential out-of-state business owners who may want to set up shop in Pennsylvania, because an excellent site already exists that is devoted to expanding businesses.¹¹⁰ Furthermore, some critics claim that high-priced technologies add unnecessary costs to an existing poorly managed organization; and that e-elixirs cannot cure some of the corrupt, bloated public sector bureaucracies.¹¹¹

Such testaments and criticisms indicate that there are many lessons to be learned for both the public and private sectors in this virtually new version of government service delivery. Nonetheless, there is an even greater concern that most e-government planners face, which is funding. Creative funding is a skill that many public leaders will need to acquire to navigate the complex process of implementing an e-government system.

¹⁰⁸ Wayne Kessler, “The Microsoft State: Pennsylvania’s Powerport Deal,” *The Commonwealth Foundation*, (2000), Online. Available:

<http://www.commonwealthfoundation.org>. Accessed: February 24, 2002.

¹⁰⁹ Online Insider, *PA Powerport: A Pioneering Portal but Microsoft Link Clicks on Some Controversy*, (August 7, 2000). Online. Available:

<http://www.conway.com/ssinsider/webpick/wp00807.htm>. Accessed: February 24, 2002.

¹¹⁰ Online Insider, *PA Powerport: A Pioneering Portal but Microsoft Link Clicks on Some Controversy* (online).

¹¹¹ Jeffery A. Kaplan, “The Powers the E,” *CIO Magazine*, (2001), Online. Available: http://www.cio.com/archive/031501/re_content.html. Accessed: March 3, 2002.

Content Analysis: Comparing and Contrasting—State of Texas and State of Washington

There are patterns in best practices decision-making practices between the State of Texas and the State of Washington. For example, the State of Texas' Department of Information Resources (DIR) has similar responsibilities and performs similar duties in state e-government initiatives to that of Washington's Department of Information Services (DIS). Another example, the State of Washington's Department of Information Services (DIS) provides technical expertise and guidelines for digital government; coordinates and supports interagency communications; develops and implements new technology infrastructure and services; advises on funding to support agencies' digital government services; and provides staff support to the ISB.¹¹²

Similar to the State of Texas, Washington has incorporated the use of multi-skilled professional teams to plan, develop, and implement an e-government system. For example in the State of Washington the Information Services Board (ISB) is providing the authorizing environment and strategic technology direction for the implementation of digital government while the Electronic Commerce Executive Steering Committee (ECESC) and the Department of Information Services (DIS) coordinate the effort to develop the policies for approval by the ISB.¹¹³

Although there were some variations in the structure of questions or objectives sought by the State of Texas – both states set standards to guide the decision-makers through the process. For example, in the State of

¹¹² Access Washington, *Digital Government Plan* (online).

¹¹³ Ibid.

Washington the approval and coordination of digital government initiatives across state agencies focuses on four broad questions:¹¹⁴

1. Infrastructure: Does the project meet the state's architectural standards, and does it fit within the state's overall infrastructure?
2. Acquisition: Does the project meet the state's investment policy?

What acquisition methodology does the agency plan to use, and why?

What is the cost effectiveness/benefit for the agency and the state?

3. Development: How does the agency plan to develop the application?
4. Implementation: How does the agency plan to deploy the project?

The primary contrast between the State of Texas and the State of Washington is that Washington established a core competence among state government professionals and to provide a resource for them to plan, design, and implement e-government system so as not to engage in outsourcing an entire initiative. The Digital Government Applications Academy assists the State of Washington with accomplishing that objective.

Comparing and Contrasting—State of Texas and State of Minnesota

The most apparent similarities between Minnesota and the State of Texas are the single point of contact approach. In addition, the Minnesota Office of Technology was responsible, similar to DIR, with the task of

¹¹⁴ Ibid.

planning and implementing an e-government system. Similar to the State of Texas, the State of Iowa's goals were to create a seamless e-government system that is user-friendly, easy to access for citizens and government officials and staff, and cost effective.

Comparing and Contrasting—State of Texas and State of Iowa

Similar to the State of Texas, the State of Iowa's goals were to create a seamless e-government system that is user-friendly, easy to access for citizens and government officials and staff, and cost effective. As previously mentioned, the IITT Task Force is largely responsible for developing a plan for governmental use of information technology, and coordination and integration of the activities between stakeholders. Interestingly, neither the TexasOnline Task Force nor the IITT Task Force received input from federal information technology professionals. However, the TexasOnline Task Force included local-level government professionals in the planning and development phases; conversely, the IITT Task Force did not.

Chapter 5. Funding: Financial/Human Costs – Financial/Human Benefits

E-Government Funding

Funding is one major area of contention for state agencies regarding implementation of electronic government systems. Although there are various bureaucratic barriers that exist to inhibit any progression in online government services, funding such projects is a major contributor to the sluggish process. This chapter focuses on state government agencies and examines the decisions made regarding electronic government (e-government) initiatives and the cost and/or beneficial impacts involved with implementing these systems.

Moreover, this chapter will explore the variety of fiscal concerns that state agencies must face and devise strategies to address when implementing an e-government system and what certain agencies are doing to address its particular concerns. Such as:

- What costs are involved with implementation of e-government systems?
- Who makes those decisions?
- Are any benefits (i.e. human) experienced after implementation of an e-government system?

The government agency examples will be North Carolina, and Ventura County, California (local level government).

Additionally, there will be brief explanation for the roles of both the Federal and State governments when it comes to funding electronic government services and the barriers that are encountered. Most importantly, this chapter includes a brief analysis of the various funding options and methods being utilized by these states. An overview of alternative funding sources to online government projects will conclude the chapter.

Federal Government's Role

It is important to note that the federal government is usually the initial funding source for any state agency project. In this particular case, the federal government provides funding resources for state agency electronic government services. The federal government provides millions of dollars annually in aid to state and local governments for information technology (IT) projects in several areas. The majority of funding resources made available to the states are in the form of grants. Federal IT grants to states generally are accompanied by rules and restrictions that limit their use to the purchase of specific technology within a program.¹¹⁵ In addition, they do not allow the funds to be used for integration of technology across more than two programs.

Unfortunately, such contingencies on states restrict the ability to implement efficient and productive systems. Those states that are not provided the luxury of huge IT budgets or do not receive consistent support from their governor must depend on federal funding. In response to these limitations some state governors are taking action to address this issue. Case in point, the National Governors Association (NGA) in December 2000 met with 15 representatives from organizations representing state executive branch officials, and the NGA has formed an alliance with these organizations that will support IT spending reform and other efforts.¹¹⁶

Although the federal government constrains upon states by requiring them to comply with federal regulations, the states must fend for themselves if they go it alone. The states have a role in their own e-government initiatives as well.

¹¹⁵ William Welsh, "Governor Look to Ease Limits on Fed IT Funds," *Washington Technology*, vol. 15, no.21 (2001). Online. Available: <http://www.washingtontechnology.com>. Accessed: October 16, 2001.

¹¹⁶ William Welsh, "Governor Look to Ease Limits on Fed IT Funds," *Washington Technology*, (online).

State Government's Role

The nation's governors are taking action to gain more control over their e-government projects, particularly in the area of funding. They are promoting the need for the federal government to ease restrictions on grants and other funds to states for their information technology projects. They addressed that issue during an assembly in Washington, February 24-27, 2001, at the National Governors Association meeting. NGA Chairman and Maryland Governor Parris Glendening appointed a nine-member e-Governance Task Force to examine public financing of IT solutions and other issues.¹¹⁷

Funding Barriers

Lack of cooperation and collaboration between state government agencies are some of the funding barriers that currently exist. In the State of Texas, the state agencies budgets are set up in a way that penalizes any agency that seeks collaborative efforts to implement an electronic government system. Some government officials are breaking through that barrier with some unique budgetary incentives. For example, Texas State Comptroller Carole Keeton Rylander produced a report, *e-Texas: Smaller, Smarter, Faster Government* in December 2000. One of the recommendations was that state agencies coordinate their IT strategic planning methods. A suggested incentive to encourage such practices was to allow agencies to move up to 50 percent of their appropriations across budgets lines for IT projects that were identified to contain coordinating plans. It seems that the report was effective because SB 1458, section 2055.054 specifies . . . identify the resources necessary for

¹¹⁷ Ibid.

projects . . . among multiple state agencies for the coordination of electronic government projects.¹¹⁸

Texas Funding Barriers

Although these efforts have been made, to date, some state office efforts are experiencing difficulties in successfully developing and implementing online services. Such as, the Electronic Government Technical Assistance Workgroup (EGTAW), an electronic government service initiative of the Office of the Governor, Office of Budget and Planning, State Grants Team for the State of Texas has yet to receive any funding, which was scheduled for certification of funding to take place on September 1, 2001.¹¹⁹ As a result, the State Grants Team is seeking other methods for funding resources, which is utilized prevalently throughout the Texas state agencies, which are grants.¹²⁰ One of the funding sources was a matching Technology Opportunities Program (TOP) grant. The recent Bush administration decision to cut back on those funds may further delay the inception of this program due to lack of funding.¹²¹

Creative Funding

States are finding creative ways to address the financial barriers and issues encountered with those barriers. Some IT systems will likely be financed by a package of resources that includes cash appropriations, grants, in-kind resources (public and private), and much redeployed human capital.¹²²

¹¹⁸ Texas Senate Bill 1458, Enrolled Version, Senator Duncan, 77th Legislative Session, 2001.

¹¹⁹ Charmane Hayman, "FieldNotes," Office of the Governor, State Grants Team, Summer Internship, July 2001.

¹²⁰ Charmane Hayman, "FieldNotes.," July 2001

¹²¹ Interview with Denise Stines Francis, Director, State Grants, Office of Budget and Planning, Office of the Governor, Austin, Texas, November 14, 2001.

¹²² Mark LaVigne, "E-Government Bridges the State-Local Divide," *Center for Technology in Government/University at Albany, SUNY*. (1997). (computer printout).

Creative financing involves the typical budget management skills and the ability to get buy-in from others to contribute additional resources.

Creative financing involves identifying and capitalizing on grant opportunities, leveraging resources, and balancing any rules or constraints that can be imposed when using multiple funding sources for an e-government project. The next sections will explore the funding options that the State of North Carolina has taken in the implementation of some of their e-government systems.

Case Study: North Carolina E-Government Fiscal Analysis — Anticipated Fiscal Impact and Strategies

The State of North Carolina has many government organizations, which include state agencies, commissions, and boards. These entities serve an extensive citizenry via their premier IT system—the NC @ Your Service portal. The portal was created and launched in only six weeks because it relied on the proven technology strategies used by their vendor partner Yahoo! The choice to use proven technology strategies has resulted in savings for the state. For instance, the portal pages can be updated and changed easily by the state, which reduces maintenance and administrative costs.

The state's decision to use common services and a shared infrastructure among multiple agencies will save their agencies significant amounts of money and create other efficient benefits in service. Although the State of North Carolina has made great strides in some of its e-government initiatives, they have experienced some challenges.

After trial and error of implementing some of its e-government systems North Carolina determined that new applications must receive financing, and the fiscal support, and technical infrastructure must be shared

and expanded for any IT operation to begin and to be sustained. Some of North Carolina's challenges follow:¹²³

- Implementing creative funding approaches to reduce dependencies on traditional sources of funds (i.e., taxes, federal funding)
- Creating public and private partnerships to develop services in a cost effective manner with minimal state investment
- Reprogramming of current fiscal resources to redirect expenditures for new business processes.
- Investing wisely to garner cost savings and service benefits.
- Directing statewide focus for IT investments to obtain greater economies of scale.

To conquer these challenges, North Carolina devised a pragmatic approach. The *Enterprise Approach*,¹²⁴ which was used for e-government system, emphasizes the statewide view (versus a parochial perspective) and it has three dimensions:¹²⁵

Philosophy with Three Tenants

1. Technology investments must be identified, evaluated and selected so expenditures are made on the right purchases. Investments must maximize the state's technology asset portfolio, duplications must be avoided, and sharing must be encouraged.

¹²³ Information Resource Management Commission, *E-Government...Using Technology to Transform North Carolina's Governmental Services and Operations in the Digital Age – Report for the General Assembly*. (January 4, 2001) pp.10. Online. Available: <http://irmc.state.nc.us/index.html>. Accessed. October 1, 2001

¹²⁴ The enterprise approach is used to implement an e-government system so that the state can design, plan and connect the system in the most economically and time efficient manner, which maximizes the citizen's service benefits and the state's cost savings that will accrue from the state's up front.

¹²⁵ Information Resource Management Commission, *E-Government...Using Technology to Transform North Carolina's Governmental Services and Operations in the Digital Age – Report for the General Assembly* (online).

2. Technology investments must be implemented and operated efficiently and economically. Projects must be managed and monitored to ensure they are completed on time, within budget, and deliver the expected results.
3. Technology investments must be employed in way that supports the goals and objectives of the state's business and programs. Investments must enable the reengineering of business processes, the streamlining of communications both within the state government and with local government.

The concept embraces the use of a solid technical and business foundation of shared technical services and common business models vital to meet the listed objectives when implementing e-government system. Develop and install applications expeditiously to receive benefits promptly, satisfy the public's expectations for offering improved services now (not later), thus increasing the likelihood of reducing implementation costs.

There are several reasons why using the enterprise approach makes good economic sense when deciding to implement an e-government system, one of the reasons is the ability to maximize the economies of scales. E-government systems require a significant amount of up-front expenses to cover the fixed cost investments for the infrastructure. The best way to maximize the economies of scales, a transaction demand must be consolidated over multiple applications in order to increase volumes and to reduce unit costs.

Such actions are necessary because e-government systems often are comprised one or more shared services like processing a credit card order, which requires a typical exorbitant one-time investment. One way that a state agency can afford to implement a new e-government, while maximizing returns on their investments and minimizing their fixed transaction costs is to

share their infrastructure between multiple applications to reduce unit transaction expenses for all state agencies.

Another reason that a state would want to use the enterprise approach is to take advantage of any existing assets. For example, the State of North Carolina has invested a significant amount of money into their existing technological infrastructure and other administrative operations (i.e., personnel), but due to budget constraints, unrealistic system execution timetables, and increased performance expectations the state must make the best of their existing resources rather than create new endeavors to facilitate e-government initiatives.

In an effort to reduce costs, decrease development time, and increase efficiencies, North Carolina is in various stages of implementing nine shared technical infrastructure services across the business needs of multiple agencies. The nine shared technical infrastructure services are as follows:¹²⁶

- Credit Card
- Common Payment Services
- Public Key Infrastructure (PKI)
- Electronic Data Interchange (EDI)
- E-Forms
- Yahoo! Store
- Electronic Auction (eAuction)
- Travel Reimbursement
- Service Broker

E-government uses technology to interact with the public in new and non-traditional way. Before now the State of North Carolina did not have the ability to finance the front-end investments and recover the ongoing costs. The new front-end investments include PKI to ensure privacy, and any new

¹²⁶ Ibid.

costs to include credit card processing fees. For example, the processing costs for credit card fees average approximately two percent of the transaction price.¹²⁷

There are several options to consider for financing, subsidizing/absorbing, and/or recovering costs of implementing and operating e-government shared infrastructure services and applications. Costs include one-time start-up, as well as ongoing operations and support. The options follow:¹²⁸

- **Intergovernmental financing:** The redirection or new appropriated funds. Subsidies for one-time start-up costs and/or ongoing processing expenses may be obtained from internal sources of funds. The subsidies include appropriations from the general fund, as well as the reallocation of current budgets.
- **Transaction or convenience fees:** These fees are usually charged to recipients for government services or member of the public regulated by government entities. The fees are typically priced on a transaction basis, and they may be a fixed amount or a percentage of the transaction value.
- **Raise base price of services to citizens:** Once a better understanding of the costs of delivery services to citizens is achieved, another option to recover the costs of new delivery channels is to raise the base price for licenses, permits, certificates, and other services. In some cases this approach would require legislation.
- **Savings from more efficient operations:** The delivery of most of the licenses, permits, certificates, and other services in state government is paper-based and labor-intensive. The collection of data online, the

¹²⁷ Ibid.

¹²⁸ Ibid.

interchange of information through integrated systems, and the providing of documentation electronically offer the potential for considerable savings in processing expenses. The Institute for Electronic Government estimates that agencies can cut some costs by as much as 70 percent by moving services online.

- External sources of funding (bond issues, creative private-public sector, partnerships, advertising): One source of funds for e-government used by some states, especially to voter one-time start-up costs, is special bond financing earmarked for technology or e-government infrastructure building. This approach treats technology investments from the financing perspective in the same manner as bricks and mortar and other infrastructure needs are met. Another method is to form a partnership with a private company to set-up e-government applications and infrastructure services without charging start-up costs. These construction expenses and ongoing operating costs are recovered by the vendor (usually from add-on transaction fees) charged to citizens or businesses using the electronic applications. Other external sources of funds include advertising on government web pages.

Case Study: Ventura County, California—Next Steps in E-Government and Financial, Economic Analysis

In an attempt to provide readers with diversity on this policy issue, this particular section will examine e-government financial issues at the local government level. This brief snapshot will give the reader some insight into possible variations in e-government practices in state versus local government agencies.

In May 2000, the Board of Supervisors adopted an initial policy on e-government, and the policy formally declared that e-government projects are a county priority and established broad guidelines and roles for future policy development and countywide collaboration. The county is moving into its second milestone for e-government and has set proposed strategies for Ventura County, California. Ventura County's goals for improving upon its e-government initiatives are development a solid foundation of appropriate policies and supporting leveraged infrastructure technologies, improved internal efficiencies via a new generation of enterprise systems, and investment in strategic externally focused initiatives and service offerings that will have broad application throughout the organization and serve as the primary points in which return on investment begins to be realized.¹²⁹

Unlike the simplicity of evaluating a specific product or service, the notion of e-government continues to grow and there is a small amount of documentation that investigates whether government agencies receive any cost benefit savings upon implementation. As a result, Ventura County is taking steps to find out more by sharing information with the other governments who are seeking to implement similar e-government initiatives. One crucial area of investment in any e-government systems is the infrastructure, and the expected return on investment will be not be evident initially, but it will become more apparent in the long-term. Conversely, when implementing a pilot program, front-end analysis can be performed to project the expected cost savings. For example, See Table 5.1 below:¹³⁰

¹²⁹ Ventura County, Board of Supervisors, "A Strategy for E-Government in Ventura County," California, May 2001, (computer printout).

¹³⁰ Ventura County, Board of Supervisors, "A Strategy for E-Government in Ventura County," p. 26

Table 5.1
Expected Cost Savings

Solution Area	Paper	Web	Savings (per Transaction)
Tax Filings	3.50	.50	3.00
Driver's License	6.60	1.25	5.35
Ticket Collection	4.00	.75	3.25
Source: Gartner Dataquest (October 2000)			

Some of the services that will most likely be included in Ventura County's e-government initiative will involve electronic payment of fines and fees. These transactions typically involve the use of credit and debit cards, which reflects similar sentiments mentioned in the State of North Carolina.

Although there are expected cost-savings benefits for Ventura County from the use of e-government, it will require an initial front-end investment for implementation and infrastructure costs, which once again was expressed in the State of North Carolina case. Ventura County has not included these costs into its current budgets, which hinders the county department's ability to move forward with any future plans for providing services to citizens via e-government. One alternative solution being considered to remove barriers is to sell advertising as a means to generate revenue to fund e-government initiatives; however, very few have bought in to this idea.

Another Perspective—Alternative Funding Methods

The State of Texas survey findings revealed expected benefits, drawbacks and transaction costs that expand across the case studies in the State of North Carolina and Ventura County. This paper revealed items that

commonly are shared among government agencies in the area of financing e-government projects, which provide evidence to support that some approaches can be generalized regarding implementing e-government initiatives. A large portion of financing will still be provided by the federal government in the form of grants, and further investigation is necessary to determine how to maximize the potential of this particular funding resource.

Explanations of possible federal funding resources and suggestions on how they may be best used follow:

Intergovernmental Grants

Intergovernmental grants, sometimes called “grants-in-aid”, are transfers of funds from one government to another, most often from a higher-level government in the federal system to a set of lower-level governments, and are intended to improve the operation of a federal system of government finance.¹³¹

The conflict typically is between the donor and the recipient during the transferring system. Usually the donor government raises the revenue, bearing whatever political burdens may be associated with the revenue function. The recipient government gets any political benefits associated with service delivery.¹³² In order to prevent any mismanagement or misappropriation of funds, the donor government seeks to control or places contingencies on the use of funds. One way of enforcing this restriction is in the form of categorical grants. These are grants that are used most often in the State of Texas, for example, when attempting to implement an electronic government system.

¹³¹ Ronald Fisher, *State and Local Public Finance* (Chicago:Irwin,1996), p. 203

¹³² John Mikesell, *Fiscal Administration: Analysis and Applications for the Public Sector* (Fort Worth:Harcourt Brace & Company, 1999), p. 513

Categorical Grants

These grants provide funding for narrow and specifically defined government programs and are typically limited to spending for a particular activity, and they come in three different forms—(1) formula, (2) project, and (3) project/formula.

The formula grants are typically distributed among eligible governments according to a legislatively or administratively determined formula.¹³³ Project grants are dispersed based on a particular project that is proposed, and they are usually awarded on a competitive basis. The project/formula grant has both project requirements and formula requirements that must be met to be considered eligible for receipt of funds. Many of these grants are matching grants, and the state must match the federal governments allotted funds in order to receive the resources. Oftentimes that is a deal maker or breaker, depending on the fiscal condition of the state.

Normally, the impacts of matching grants on a state in the price reduction of additional amounts of aid-in-service to the recipient state government. Furthermore, the states can also receive non-matching grants. Each of these grants can be either open-ended or close-ended. These types of grants could evoke different economic impacts by either increasing the resources available to provide government services (income effect) or by increasing resources and reducing the marginal costs to additional services (price effect).¹³⁴

In this case, the state is considered the consumer, and when there is a decrease in the price of a service, there will be a greater effect on the

¹³³ Ibid.

¹³⁴ Ronald Fisher, *State and Local Public Finance* (Chicago:Irwin,1996), p. 203

consumption of goods to provide that service, and when there is an income increase that will also increase consumption. This is what takes place in state government when a non-matching, particularly open-ended grant is received. Most often the economic impact of an open-ended matching grant is that it is expected to increase government spending on a particular service by a greater amount than if the state government were to receive a lump-sum grant of an equal amount.

Funding Analysis: Comparisons between Ventura County, California and North Carolina

Some of the services that will most likely be included in Ventura County's e-government initiative will involve electronic payment of fines and fees.¹³⁵ These transactions involve the use of credit and debit cards, which reflects similar sentiments mentioned in the State of North Carolina.

Although there are expected benefits cost savings for Ventura County from the use of e-government, it will require an initial front-end investment for implementation and infrastructure costs¹³⁶, which once again was expressed in the State of North Carolina case. Ventura County has not included these costs into its current budgets, which hinders county department's ability to move forward with any future plans for providing services to citizens via e-government.¹³⁷ One alternative solution being considered to remove barriers is to sell advertising as a means to generate revenue to fund e-government initiatives; however, very few have bought in to this idea.¹³⁸

¹³⁵ Appendix 2, Detail Policy Recommendations, Business Technology Committee, County of Ventura, May 2001, p. 8.

¹³⁶ Ibid.

¹³⁷ Ibid.

¹³⁸ Ibid.

Recommendations for Texas

My recommendations for the State of Texas is to appoint an intergovernmental task force to recommend a technology plan that would:

- Reduce interagency and intergovernmental redundancy
- Examine government infrastructure at all levels
- Recommend specific projects for intergovernmental cooperation
- Identify barriers to deployment of recommended projects
- Suggest a mechanism for ongoing cooperation
- Recommend a long-term strategy to support the plan
- Identify realistic steps that begin the process of transforming the way government conducts business with its citizens

Additionally, the State of Texas may want to look to the State of West Virginia for answers on this subject. The public technology and legislative leaders in that state took proactive steps to maximize the 1996 Telecommunications Act.¹³⁹

The public leaders anticipated that the bureaucratic red tape that goes with such programs would discourage some school representatives. To assure that their state received the technological services that were needed the Office of Technology and Information Systems, in the state's Department of Education, completed the applications for all of the schools in that state. The result of that proactive approach was over \$26.5 million in e-rate discounts for their schools. Now each school has a local area network, high-speed connection to the Internet.

This information should provide any government agency with an insightful analysis of the e-government funding strategies and expected fiscal

¹³⁹ 1996 Telecommunications Act included telecommunications discounts for schools to access the Internet. Source: Phyllis Justice, Telecommunication Specialist, West Virginia Department of Education, Office of Technology and Information Systems.

benefits and/or drawbacks when making a decision to implement an e-government system. The next chapter will discuss the murky and the most often misunderstood challenge in planning and implementing e-government—accessibility issues.

Chapter 6. E-Government and Accessibility: Digital Divide—Dispelling Myths, and Exploring Realities

“Online government resources are public resources and should not be presented to the public in any form that presents a “digital divide” . . . to do so is to put [up] a wall between users and the institutions charged to serve them.” Ryan Turner, E-Government and the Digital Divide, February 2001

Ida received a notice in the mail that she can now access her monthly social services casework information via a new e-government service provided by the state in which she lives. Unfortunately, she has neither a computer nor the technological infrastructure in her area to support an Internet service provider network. This scenario is an all too common occurrence in the United States and abroad. Although government online systems are unable to come in person to receive service; the dilemma is that these e-government services are not accessible to a large number of citizens. Thus, there exists a digital divide.

Some would argue that the so-called “digital divide” has disappeared. I beg to differ. The Bush administration is attempting to cut federal technology spending earmarked for digital divide initiatives based on a National Telecommunications and Information Agency (NTIA) report. The report claims that growth in Internet usage among poor and minority Americans far exceeded that for wealthy, white or Asian Americans.¹⁴⁰

However, the NTIA failed to mention where the Internet usage takes place. If usage is in the workplace, then there is still a significant disparity in Internet use and access. As it pertains to e-government, according to the Pew

¹⁴⁰ Yochi J. Dreazen, “White House Takes Aim at Technology Programs.” *The Wall Street Journal* (February 27, 2002), p. A22.

Internet and American Life (PIAL) report, about a third of their sample (34%) accessed a government site from a computer at their workplace, and 49% of the most active government site users did so from work.¹⁴¹ Compare that to the most recent Department of Labor unemployment statistics as of March 2002. The white population unemployment rate is 5.4%; the black population unemployment rate is slightly more than double that of whites at 10.9%; and the Hispanic population is slightly lower than the blacks at 8.1%.¹⁴²

This information illustrates that if access is measured solely based on usage, as stated by the NTIA report, and using the PIAL report then a digital divide stills exist among blacks and Hispanics as it pertains to access and usage of the Internet in the work environment. In order to debunk the myth that the digital divide is narrowing consider that without a job, Internet access and use at home is a misconception.

Government Decisions: Realizing the Myth—Dealing with the Realities

Public leaders, when planning and implementing e-government system, remained focused that they are improving service delivery to all citizens, but it appears that applies only to those with the privilege to connect with e-government systems. David Agnew, executive director of the Governance in the Digital Economy Project, says, "If [putting government online] is just a way of reinforcing access for people who probably already have more opportunity to access government and decision-makers, then it

¹⁴¹ Pew Internet and American Life Project. *The Rise of the E-Citizen: How People Use Government Agencies' Web Sites*. (April 3, 2002). Online. Available: <http://www.pewinternet.org/reports/toc.asp?Report=57>. Accessed: April 10, 2002

¹⁴² United States Department of Labor, *Labor Statistics March 2002*. Online. Available: <http://www.bls.gov/news.release/empsit.t02.htm>. Accessed: April 8, 2002.

really hasn't been much of an advance at all."¹⁴³ Before discussing the state models designed to address the access issue, it is essential to examine some of the underlying issues of “digital disparity”, also commonly referred to as the “digital divide” in the United States.

It would be beneficial to establish the context of the digital divide for this report. According to a Digital Divide Network article, the term for the “digital divide” refers to the gap between those who can effectively use new information and communication tools, such as the Internet, and those who cannot.¹⁴⁴ In addition, it mentions that there are three different factors that contribute to the divide which are (1) education, (2) income, and (3) content.

Education and the Digital Divide

Disparity in Educating Children from Different Socio-Economic Backgrounds

According to the Department of Education’s National Literacy Survey, approximately 44 million American adults are functionally illiterate.¹⁴⁵ This author argues that the lack of quality education is a contributing factor to the manifestation of limited access to technology in underserved communities. It is safe to say that the American public school system is failing miserably at teaching and preparing children for college and to compete successfully with other children around the globe.

Therefore, it is even more fitting to say that they have an even greater deficiency in educating the underserved population, consisting of the minority

¹⁴³ Constantine von Hoffman, “The Critical Issue of Access: Unequal Access to Education and the Internet is an Obstacle on the Road to E-Government,” *CIO.com* (2001). Online. Available: http://www.cio.com/archive/enterprise/111599_egov.html. Accessed: April 8, 2002.

¹⁴⁴ The Digital Divide Network, *What Do We Mean When Say ‘Digital Divide?’* Online. Available: <http://www.digitaldividenetwork.net>. Accessed: December 10, 2001.

¹⁴⁵ The Digital Divide Network, *What Do We Mean When Say ‘Digital Divide?’* (online).

and rural communities. It can further be argued that one factor that is attributed to the lack of quality education in the underrepresented communities is the displacement of students that comprise that population. For example, in Prince George County, New York, “. . . [minorities] are twice as likely to be enrolled in “special education” English classes than in English classes for the talented and gifted; and less likely to be enrolled in college prep courses.”¹⁴⁶ Unfortunately, these types of practices are not just isolated incidents that happen in Prince George County. More important than displacement of students as a contributor to lack of quality education is the disparity in school financing.

Disparity in School Financing – Show Them the Money!

This author suggests that one of the elements attributed to disparity in school financing is the result of the *San Antonio School District v. Rodriguez* case in Texas. The case established that there was no federally guaranteed right to equal education. Furthermore, the court issued that the “ultimate solution must come from the lawmakers and from the democratic pressures of those who elect them.”¹⁴⁷

The *Rodriguez* case set the stage for the removal of federal protection to remedy school equalization and shifted the accountability to the states. As a result, there arose three general approaches to address the issue. The first approach was to increase state funding for schools and to permit school districts to assess additional property taxes in addition to their state funds. The second method was to rely totally on state funds. The third approach, which occurred in Texas, was to keep the property tax system but coerce

¹⁴⁶ William Rasberry, “Prince George’s County Public Schools Attempt to Solve Success Rate of Black Males,” *Washington Post* (January 24, 1990), p. A-27

¹⁴⁷ John J. Harrigan, *Politics and Policy in States & Communities*, 6th Ed. (New York: Longman, 1997), p. 377.

wealthy districts to share their wealth from their property taxes with the impoverished districts.

Policy's Role in Education and Technology Disparity

Conservatives view public education as promoting social upward mobility and the development for human capital, which improves economic productivity. However, conservative Edward Blanchfield argued, "There will be *some* . . . students who are simply not capable of doing high school work. These individuals tend to be concentrated in . . . a culture of poverty, which inhibits the desire for achievement, self-improvement, and deferred gratification."¹⁴⁸

Although the liberals do agree with the conservatives that education provides economic opportunity, and promotes upward mobility, they contrast on their views about the students' abilities. The liberal views regarding the failing school systems is that the school's are responsible and not the students.

What Does All of This Have to Do with E-Government and Access Issues?

Without the legal and political power to enforce public education as a right, underserved groups are at a disadvantage for utilizing the tools (i.e., information technology) that are available to induce empowerment. It is an unfortunate reality that quality and equitable public education has not been established as a right, especially in regard to the underserved communities. My position is that a similar notion is nested within the decisions that are made regarding providing access to technology for all citizens.

¹⁴⁸ Ibid., p. 369

Taking it a Step Further: Education’s Link with Political Economy and How that Link Shapes Decision Making in Education and Technology — “Separate but Equal” Revisited

At present, information technology is analogous with education, in the way it was viewed during the time when various court cases were being tried on state and federal levels regarding access to education. Politicians are also aware that historically education has held a crucial place in the American political economy. Perhaps the most evident link between public education and the political economy takes place in higher education.

The link is especially robust between businesses and the large research-oriented universities, such as the University of Texas at Austin. The businesses benefit from the technical research done at these universities, and the universities benefit from the donations of equipment, contracts, and close amicable ties with the corporations. State government views a well-functioning university as an asset for attracting more industry, and those universities without such credentials (i.e., some historically black universities) receive little or no acknowledgment when policy decisions are made regarding access to technology being provided to the underserved population whom commonly attend such institutions of higher learning.

Hence, the connection of “*separate but equal*” promoted during the *Brown v. Board of Education*, where the underrepresented educational systems were not afforded access to quality resources for academic advancement. Researchers and public leaders must further examine this one aspect as an alternative to viewing the issue of the disenfranchised communities lack of access to technology.

Public Leaders —What Must They Do?

Consequently, policy-makers must acknowledge that there are assets within the underserved communities, which are typically perceived as lost causes or poor helpless souls. The public sector needs to shift from viewing and treating this population as social liabilities to acknowledging and finding ways to improve upon their human capital. According to Kretzman's "asset model"¹⁴⁹, finding and building upon the assets in the community is one of the most effective ways to address the current [social and civic] deficiencies.

Don't Believe the Hype – Look Beyond the Surface

Any public leader or state agency decision maker in planning and implementing e-government must become informed of the underlying issues related to the digital divide and take necessary steps to eradicate them speedily. According to Ryan Turner, Director, Nonprofits Policy and Technology, OMB Watch, e-government planners and implementers face two obstacles "opacity" and "redlining."¹⁵⁰ Opacity refers to the incomprehensible context in which content is presented; and redlining refers to willing or unconscious exclusion of information sources and content that reflects the bias of the content producer.¹⁵¹

Attack It at the Core – A Bottom-Up Approach

Based on previous arguments about the high illiteracy rate in the United States, it is essential that any public leader involved in e-government

¹⁴⁹ See: Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets, Kretzman, John, P. and John L. McKnight, 1993

¹⁵⁰ Steve M. Schneider, "Political Portals and Democracy: Threats and Promises." *iMP Magazine* (May 2000), Online. Available: http://www.cisp.org/imp/may_2000/05_00schneider.htm. Accessed: January 20, 2002.

¹⁵¹ OMB Watch, "E-Government and the Digital Divide," report prepared by Ryan Turner, Washington, D.C., February 2001.

planning and implementation involve educators and targeted-population end-users in all phases of e-government initiatives. Incorporating this type of proactive approach will ensure success of the e-government system meeting some ideal objectives:

- Meeting the needs of all citizens, including the underserved population
- Providing information that is accessible to various levels of educational capacity
- Increase the likelihood of e-government use by improving content relevance for a diverse population
- Increase civic capacity in populations with historically low civic participation
- Empower typically disenfranchised communities

A new report from the Morino Institute contends that as states strive to close the digital divide, access to technology must not be used as the sole measure of success.¹⁵² The report finds that initiatives can produce meaningful change only when people apply technology with tangible economic, educational, and social outcomes in mind. Table 6.1 describes the key findings:¹⁵³

¹⁵² National Governors Association, Report Focuses on Digital Divide Strategies to Improve Economic Outcomes, Thomas Rubel , Economic and Technology Policy Studies, See: http://www.nga.org/center/frontAndCenter/1,1188,C_FRONT_CENTER%5ED_2514,00.html

¹⁵³ The Morino Institute, *Morino Institute Data*. Online. Available: <http://www.morino.org/>. Accessed: April 6, 2002.

Table 6.1
Morino Institute Data

<ul style="list-style-type: none"> • The best economic outcomes occur when individuals understand the potential of technology, acquire the skills to use it, and are wired together.
<ul style="list-style-type: none"> • Technology initiatives imposed on a community by outsiders are often ineffective.
<ul style="list-style-type: none"> • Investments in technology must go far beyond funding for hardware, software, and wires to develop programs that help people and organizations understand and apply the technology.
<ul style="list-style-type: none"> • Federal and state governments should do more to provide frameworks and incentives to help focus philanthropic resources and stimulate private-sector investment in low-income areas.
<ul style="list-style-type: none"> • New philanthropic models, including social venture funds and social investment funds, could dramatically expand investment in technology-related initiatives.
Adapted from: The Morino Institute 2002

State Decision Makers Take Action—But How Much?

Some states are attempting various approaches to address the access issues encountered with e-government initiatives. The first step many states are taking is soliciting input from citizen stakeholders. The goal is to understand what citizens desire from e-government services and how the government can best provide and deliver those services.

Stakeholder: Receiving End-User Input/Feedback

Various techniques are used to gather the information to include person-to-person focus groups, surveys, and interviews. For example, the State of California’s Life Event and Affinity Design¹⁵⁴ (L.E.A.D.) spearheaded by the Governor’s Office of Innovation in Government, conducted focus groups with citizens and businesses. The results from those focus groups were analyzed to produce recommendations for California’s

¹⁵⁴ Centerpiece of the Governor’s Office for Innovation in Government to guide a coordinated effort to use innovative technology techniques to ensure that customers [citizens] were at the forefront of all [e-government] decisions. See: <http://www.iig.ca.gov/lead/index.shtml>.

web-portal and e-government services.¹⁵⁵ Another example is the State of Indiana, which developed and implemented the portal AccessIndiana. Then after citizens had some experience with it, state officials began to ask them, “What other government services would you like provided through this portal?”¹⁵⁶

These examples show what some state administrators are doing to involve the end-user. Administrators learn what citizens need and desire from an e-government system, but are these efforts really building a bridge to close the digital divide? It is a start; however, efforts must be taken a step further by incorporating community outreach with e-government service initiatives. Surprisingly, intensive investigation only revealed one state that provided information regarding collaborative efforts between community outreach and e-government—the State of North Carolina.

North Carolina – Taking it to the Streets

North Carolina has an e-NC Initiative, which combines e-government and community outreach to make significant strides in filling the digital gap. The e-NC Initiative is a grassroots effort to connect all North Carolinians, particularly those in rural areas, to the Internet; and the Rural Internet Access Authority is the group leading the e-NC Initiative.¹⁵⁷

In addition, this collaborative effort is investing \$6.3 million dollars toward the community outreach effort to provide telecenters, which are technology hubs within the communities (See Table 6.2):

¹⁵⁵ Center for Technology in Government. *What Citizens Want From E-Government: Current Practice Research*. Online. Available: www.ctg.albany.edu. Accessed: April 9, 2002.

¹⁵⁶ Center for Technology in Government. *What Citizens Want From E-Government: Current Practice Research* (online).

¹⁵⁷ State of North Carolina, *e-NC: Connecting North Carolina to a Better Future*, <http://www.e-nc.org>, Online. Available: <http://www.beaufort.cc.nc.us/pdf/enc.PDF>. Accessed: April 7, 2002.

Table 6.2
e-NC Telecenters

Technology Hub Services
Offer Internet and computer training
Serve as technical resource centers for communities
Provide sites for telework
Act as business incubators
Source: e-NC: Connecting North Carolina to a Better Future

Furthermore, e-NC Initiative has the NC TechForce, which is made up of student volunteers from across the state with an interest in the Internet and computers, and they offer technical assistance.¹⁵⁸ In addition, there are some legislative actions in place to help with these efforts. For instance, in February 2000, based on recommendations from then White House chief of staff Erksine Bowles, North Carolina solidified an agreement with the state's three major telecommunications companies to bring high-speed Internet access to all areas of North Carolina by 2003.¹⁵⁹

In addition, SB1343, authored by Senator Eric Reeves and Representative Joe Tolson, helps to provide rural areas with sorely needed Internet service. Furthermore, the bill created the aforementioned *Rural Internet Access Authority* organization, the main goal of which is to bring affordable, high speed Internet access to the rural areas of North Carolina.

Although it is only one state, this is evidence that some administrators are taking steps to build bridges in the community to close the digital divide. Local government is also seeking answers from and listening to their citizens.

¹⁵⁸ State of North Carolina, *e-NC: Connecting North Carolina to a Better Future*, <http://www.e-nc.org> (online).

¹⁵⁹ Steve Towns, "South Rising: North Carolina's IT Explosion Rests on a Solid Foundation", *Govtech.com*, (2000). Online. Available: <http://www.govtech.net/magazine/gt/2000/nov/ncFeature/soutrising.phtml>. Accessed: February 9, 2002.

Local Government is Representing the People

In Fairfax County, Virginia the citizens were deemed responsible for the redesign of that county's website. Merni Fitzgerald, Fairfax County spokesperson claims, "One of the most important aspects of [redesigning the portal] was citizen input."¹⁶⁰ The county also used focused groups to learn more from the people in the community who would use the website. The data from those exercises revealed that the citizens were not always aware of the responsibilities of each department or agency within the county. As a result, site planners and developers organized the redesigned portal so that users can find information without the need for any prior knowledge about county agency or department responsibilities.¹⁶¹

Such examples are encouraging in regard to government agencies, particularly at the state level, reaching out to the community to help connect the underrepresented communities to access e-governments services. Subsequently, more must be done, and if more is being done, then that information needs to be easily accessible and appropriately listed in online databases so that searches will reveal that information.

Accessibility Issues Must Be Addressed Below the Technological Surface—And That's My Final Answer!

The bottom line is that e-government decision-makers facing the challenge of accessibility must go to the root of the problem. They will need to build a team of stakeholders who express commitment to the initiative, and buy-in to a bottom-up approach. Building from the bottom-up will ensure that

¹⁶⁰ C. E. Pelc, "Web Design by the People," *Govtech.com*, (2001), Online. Available: <http://www.govtech.net>. Accessed: March 10, 2002.

¹⁶¹ C. E. Pelc, "Web Design by the People," (online).

critical social issues, such as education, are included early in the planning phases and remain throughout implementation and management.

The next chapter concludes this report, reiterating some the key points regarding the relevance and importance of e-government services. Most importantly, it examines the question, “What is the future of e-government?”

Chapter 7. Conclusion: Summary on E-Government and Its Future

The question of whether e-government is necessary has been unequivocally answered in the report – it is a resounding – yes! In addition, there are currently more than 20,000 websites offering information.¹⁶² However, some may question whether the e-government websites improve citizen relationships with the public sector. According to the Pew Internet and American Life Project report, 60% of government website users say such sites had improved their interactions with at least one level of government; 45% said it had improved the way they interact with state government.¹⁶³ These statistics are evidence that some government officials are fulfilling a need for their citizens and addressing an area of service delivery that is a novel concept in various regions of the United States.

What is the Future of E-Government?

Following the tragic events of September 11, 2001, the velocity of moving forward with e-government initiatives could experience a decrease in momentum. The fear of online information aiding terrorist activities is a grave concern for many Americans, especially among policy-makers. Rep. Paul Kanjorski (D- Pa.) said, “E-government’s promise of an informed citizenry . . . may be curtailed by new concerns over homeland security.”¹⁶⁴ However, Norman Lorentz, the new chief technology officer at the Office of

¹⁶² Kaplan, Jeffrey A. “The Powers That E.” *CIO Magazine*, (2001), Online. Available: http://www.cio.com/archive/031501/re_content.html. Accessed: April 3, 2002.

¹⁶³ For more details view the entire Pew Internet and American Life report at <http://www.pewinternet.org/reports>

¹⁶⁴ Matthews, William. “Debating e-gov: curtail or proceed?” *FCW.com, Federal Computer Week*, (2002), Online. Available: <http://www.fcw.com/geb/articles/2002/0318/web-egov-03-21-02.asp>. Accessed: April 3, 2002

Management and Budget claimed that the Bush administration would push forward with its e-government initiatives, nonetheless.¹⁶⁵

Those sentiments were during the year 2001. Now in 2002, Senators Joe Lieberman (D-Conn.) and Fred Thompson (R-Tenn.), after months of negotiations, did get the E-Government Act of 2002 enacted in March 2002.¹⁶⁶ Ironically, the Bush administration opposed one of the bill's major components – the appointment of a federal chief information officer. The bill's author settled on an administrator, who would be confirmed by the Senate and oversee of fund of \$346 million during four years for e-government initiatives and related projects.¹⁶⁷

E-Governance vs. E-Government

Although it is in the infancy phase, the concept of e-governance is beginning to take form. However, there are still those who are not quite clear about the e-governance—what is it exactly? Mike Dunham, co-director of the Center for eGovernance, defines it as the “people, processes and policies associated with managing technology,” in contrast with what the concept of e-government, which he describes as the technical aspects of putting government services online.

Frankly, it sounds like a play on words—similar to the whole voluntarism versus volunteerism debate—mere semantics. The bottom-line is that government has the responsibility to provide citizens with the most up-to-

¹⁶⁵ Matthews, William. “Debating e-gov: curtail or proceed?” *FCW.com, Federal Computer Week*, (2002), Online. Available: <http://www.fcw.com/geb/articles/2002/0318/web-egov-03-21-02.asp>. Accessed: April 3, 2002

¹⁶⁶ Hasson, Judi. “Senate Resurrects E-Gov Bill.” *FCW.com, Federal Computer Week*, (2002), Online. Available: <http://www.fcw.com/geb/articles/2002/0325/web-egov-03-25-02.asp>. Accessed: April 3, 2002

¹⁶⁷ Hasson, Judi. “Senate Resurrects E-Gov Bill.” *FCW.com, Federal Computer Week*, (2002), Online. Available: <http://www.fcw.com/geb/articles/2002/0325/web-egov-03-25-02.asp>. Accessed: April 3, 2002

date service delivery to include: access to current information, user-friendly application (i.e., person-to-person, phone, or online), and reduced costs for same or better service (i.e., fees). The ultimate goal is to encourage and increase the amount of civic participation of citizens, particularly among the disenfranchised and voiceless.

Regardless of what critics of e-government may say, it is not going to disappear. Government officials must face the fact that they must render online government services. It is best when their approach can accomplish a win-win situation for the government and its citizenry. In addition, it would be prudent to develop a strong networking system among states to share information in planning and implementation practices and stay abreast of state initiatives. For instance, in December 1995, Western governors formally agreed to begin a new initiative called SmartStates. It would allow anyone to click on a map of the United States and see what innovative policy and management reforms are underway in that state.¹⁶⁸ Furthermore, anyone would be able to click on an alphabetical list of policy, services and electronic applications and see what states are interested in collaborating on those areas.¹⁶⁹ Unfortunately, this website no longer exist—appears this is an opportunity for states to take up this challenge. (See Appendix II – Resource List)

Finally, the information revealed in this report should provide useful reference information and contacts for any e-government project. The intended result is to provide state-level decision-makers with insight, useful information, and contacts to assist in developing stellar e-government systems, which may be modeled nationwide. Additionally, further research

¹⁶⁸ Technology and Governance: The Century of the States – Michael O. Leavitt, Governor of Utah

¹⁶⁹ Technology and Governance: The Century of the States – Michael O. Leavitt, Governor of Utah

could investigate business and community sectors to increase reliability and validity of outcomes.

A combination of these varied methodologies, philosophies, and recommendations will provide fertile ground for seeds of e-government projects to grow and flourish. Such [actions] will reward progress and innovation; and foster healthy competition among agencies [venturing into cyberspace].¹⁷⁰

¹⁷⁰ “Bringing Digital Opportunity to All Texans: The Report of the Lieutenant Governor’s Advisory Council on the Digital Economy”, Mike Maples, Chair, Rick Perry then Lieutenant Governor

Appendix I.

The Single Question Format

1. Identify the problem

What is the *single question*, the answer to which is all the group needs to know to accomplish its purpose for the meeting?

2. Create a Collaborative Setting

A. Agree on principles for discussion.

What principles should we agree on in order to maintain a reasonable and collaborative approach throughout the process?

Examples:

We will:

1. Invite and understand all points of view.
2. Remain fact-based in our judgements.
3. Be tough on the issues, not each other.
4. Put aside any personal agenda.

B. Surface any assumption and biases.

What assumptions and biases are associated with the single question identified in Step 1, and how might they influence the discussion?

Examples:

1. We tend to assume we know our customers' needs.
2. We believe we have efficient processes.
3. We think our level of customer service is acceptable.
4. We assume our past approach should be our future strategy.

3. Identify and Analyze the Issues (Subquestions)

Before responding to the single question in Step 1, what *issues, or subquestions must be answered* in order to fully understand the complexities of the overall problem?

- Limit opinions by focusing on the facts.
- If facts are unavailable, agree on the *most reasonable* response to each subquestion.

Issues (Subquestions)

Relevant Facts

Best Response

4. Identify Possible Solutions

Based on an analysis of the issues, what are the two or three *most reasonable* solutions to the problem?

- Determine the advantages/disadvantages of each.

Possible Solutions

Advantages

Disadvantages

5. Resolve the Single Question

Among the possible solutions, which one is *most desirable*?

Adapted from Carl E. Larson, Ph.D. and Frank M.J. LaFasto, Ph.D., 2001
The Single Question Format, © 1983

Appendix II.

State Government	Other
<p>(Texas) Agency Strategic Plan for Fiscal Years 2001-05, Department of Information Resources, Texas (June 2000)</p> <p>http://www.dir.state.tx.us</p>	<p>Ten Most Wanted Government Documents contains reports from various states regarding funding issues, concerns and possible solutions.</p> <p>http://www.cdt.org/righttoknow/10mostw</p>
<p>(All States) State and Federal E-Government Full Report 2001, Darrell M. West, Brown University – survey of 50 states websites.</p> <p>http://www.insidepolitics.org/egovt01us.html</p>	<p>E-Gov 2002 Government Solutions Center</p> <p>http://www.e-gov.com</p>
<p>(Texas) Telecommunications Infrastructure Fund Board – funding/grant resource information.</p> <p>http://www.tifb.state.tx.us/</p>	<p>Ontario Business Connects (OBC) – businesses can interact with all levels of government using seamless government portals</p> <p>http://www.ccr.gov.on.ca/obcon/welcome</p>
<p>(Wisconsin) E-Forms Project – JetForm Flow as this state’s e-form standard.</p> <p>Standard: http://enterprise.state.wi.us/static/standards/std0401.htm</p> <p>Project: http://enterprise.state.wi.us/static/forms/forms.htm</p>	<p>Center for Technology in Government</p> <p>http://www.ctg.albany.edu</p>
<p>(Pennsylvania) Enterprise E-Government Briefing – Office of Information Technology Presentation, Sept. 2000, PA PowerPort.</p> <p>http://www.oit.state.pa.us/oaoit/cwp/view.asp?A=186&Q=73545</p>	<p>NASCIO Recognition Awards – Recognizing all levels of government in information technology projects and initiatives.</p> <p>https://www.nascio.org/awards/index.cfm</p>
<p>(North Carolina) e-NC Initiative – grassroots effort to connect all North Carolinians, particularly in rural areas.(presentation)</p> <p>http://www.beaufort.cc.nc.us/pdf/enc.PDF http://www.e-nc.org</p>	<p>Corporation for National and Community Service – works with communities to improve and increase public awareness and civic participation. (i.e., Sept. 2001 – meeting in Washington, D.C. to discuss the role of technology across government agencies.</p> <p>http://www.nationalservice.org/</p>

Note: Compiled this list of useful information discovered while conducting research

Bibliography

Access Washington. *Digital Government Plan*. Online. Available:
[http:// www.access.wash.gov](http://www.access.wash.gov). Accessed: January 11, 2002.

Barrett, Phil, Director, E-Business, Technology Research and Agency Assistance, Department of Information Resources, Austin, Texas. Email, "Professional Report: E-Government Best-Practices, Interview Question Responses." to Charmane Hayman, February 2, 2002.

Barrett, Phil, Director, E-Business, Technology Research and Agency Assistance, Department of Information Resources, Austin, Texas. Telephone Interview by Charmane Hayman, March 7, 2002.

Board of Supervisors. " A Strategy for E-Government in Ventura County." Ventura County, California, May 2001. (Computer printout)

Bordens, Kenneth S. and Bruce, B. Abbott. *Research Design and Methods: A Process Approach*. Mayfield Publishing Company: London, 1996.

Center for Democracy & Technology. *Descriptions*. Online. Available:
<http://www.cdt.org/egov/descriptions.shtml>. Accessed: June 4, 2001

Center for Technology in Government. *Tying A Sensible Knot: A Practical Guide to State-Local Information*. Online. Available:
<http://www.ctg/albany.edu>. Accessed: June 4, 2001

Cook, Meghan E. "What Citizens Want From E-Government: Current Practice Research." *Center for Technology in Government*. (2000), pp. 4. Online. Available: <http://www.ctg.albany.edu> Accessed: March 31, 2002.

Covey, Stephen R. *The Seven Habits of Highly Effective People: Powerful Lessons in Personal Change*. New York: Simon and Schuster, 1989.

Dreazen, Yochi J. "White House Takes Aim at Technology Programs." *The Wall Street Journal* (February 27, 2002), p. A-22.

Fisher, Ronald C. *State and Local Public Finance*. Chicago:Irwin, 1996.

Information Resource Management Commission. *E-Government...Using Technology to Transform North Carolina's Governmental Services and Operations in the Digital Age – Report for the General Assembly*. (January 4, 2001) Online. Available: <http://irmc.state.nc.us/index.html>. Accessed. November 1, 2001.

Greenfield, Stuart. Visiting Professor, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin. Email, "The Next Revolution – Economist.com, online article," to Charmane Hayman, December 3, 2001.

Grimley, Ben. "Service Without Seams." *Government Technology*, (2000). Online. Available: <http://www.govtech.net/magazine/servicecitizen/ifttheybuildit.phtml>. Accessed: June 6, 2001.

- Harrigan, John J. *Politics and Policy in States & Communities*. 6th Ed.
New York: Longman, 1997.
- Hasson, Judi. "Senate Resurrects E-Gov Bill." *Federal Computer Week*,
(2002). Online. Available: <http://www.fcw.com/geb/articles/2002/0325/web-egov-03-25-02.asp>. Accessed: April 3, 2002
- Hayman, Charmane. "FieldNotes: Office of the Governor, State Grants Team,
Summer Internship." Austin, Texas, July 2001.
- Hickman, L. J. *Dewey's Pragmatic Technology*. Bloomington, IN: Indiana
University Press, 1990.
- John F. Kennedy School of Government. *The Harvard Policy Group on
Network-Enabled Services and Government, Eight Imperatives for
Leaders in a Networked World: A Series of Guidelines for the Year
2000 and Beyond, Imperative 2: Use IT for Strategic Innovation, Not
Simply Tactical Automation*. (2000). Available:
<http://www.ksg.harvard.edu/stratcom/hpg/Imp2.pdf>. Accessed:
February 8, 2002.
- Kaplan, A. *The Conduct of Inquiry: Methodology for Behavioral Science*.
Scranton, PA: Chandler Publishing Co., 1964
- Kaplan, Jeffery A. "The Powers the E," *CIO Magazine*, (2001). Online.
Available: http://www.cio.com/archive/031501/re_content.html.
Accessed: March 3, 2002.
- Kessler, Wayne. "The Microsoft: Pennsylvania's Powerpoint Deal," *The*

Commonwealth Foundation, (2000), p.1-2

Kouri, Matt. "The Technological Frontier." *Deloitte Consulting, (2000),*
p. 3-7. (computer printout).

LaFasto, Frank, and Carl Larson. *When Teams Work Best: 6000 Team Members and Leaders Tell What It Takes to Succeed. California: Sage Publications, 2001*

Larson, Carl E and Frank M. J. LaFasto. *Teamwork: What Must Go Right/What Can Go Wrong. California: Sage Publications, 1989.*

LaVigne, Mark. "E-Government Bridges the State-Local Divide." *Center for Technology in Government/University at Albany, SUNY. (1997).*
(computer printout).

Loughrey, Kate. Texas Education Agency, Austin, Texas. Telephone
Interview by Charmane Hayman, February 27, 2002.

Matthews, William. "Debating e-gov: curtail or proceed?" *Federal Computer Week, (2002).* Online. Available:
<http://www.fcw.com/geb/articles/2002/0318/web-egov-03-21-02.asp>.
Accessed: April 3, 2002.

Mikesell, John. *Fiscal Administration: Analysis and Applications for the Public Sector. 5th Edition. Fort Worth:Harcourt Brace & Company, 1999.*

Mitra Vanessa Castillo. "For The Public's Eye's Only: Who Has the Right to Know?" Professional Report, Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, 2001.

National Electronic Commerce Coordinating Council Symposium 2001 White Paper. "Enterprise Electronic Government: E²Gov." Paper presented at the NECCC Annual Conference, Las Vegas, Nevada, December 10, 2001.

National Electronic Commerce Coordinating Council. *Website*. Online. Available: <http://www.ec3.org/>. Accessed: January 10, 2002.

Newcombe, Tod. "If You Build It, Will They Come," *Government Technology*, (2000). Online. Available: <http://www.govtech.net/magazine/servicecitizen/ifyoubuildit.phtml>. Accessed: July 8, 2001

OMB Watch. "E-Government and the Digital Divide," report prepared by Ryan Turner, Washington, D.C., February 2001. (computer printout).

Online Insider. *PAPowerPort: A Pioneering Portal, but Microsoft Link Clicks On Some Controversy*. Online. Available: <http://www.conway.com/ssinsider/webpick/wp000807.htm>. Accessed: February 24, 2002.

Pelc, C. E. "Web Design by the People." *Government Technology*, (2001). Online. Available: <http://www.govtech.net>. Accessed: March 10, 2002.

Pew Internet and American Life Project. *The Rise of the E-Citizen: How People Use Government Agencies' Web Sites*. (April 3, 2002). Online. Available: <http://www.pewinternet.org/reports>. Accessed: April 10, 2002.

Raspberry, William. "Prince George's County Public Schools Attempt to Solve Success Rate of Black Males." *Washington Post* (January 24, 1990), p. A-27.

Robinson, Brian. "A Twist On E-Government." *Federal Computer Week*, (2002). Online. Available: <http://www.fcw.com/geb/articles/2002/0311/web-city3-03-13-02.asp>. Accessed: March 28, 2002.

Robinson, Brian. "Who Cares About E-Government?" *Federal Computer Week*, (2002). Online. Available: <http://www.fcw.com/geb/articles/2002/0311/web-city3-03-13-02.asp>. Accessed: March 28, 2002.

Sarkar, Dibya. "Center Offers E-Governance Resources." *Federal Computer Week*, (2000). Online. Available: <http://www.civic.com/civic/articles/2000/1211/web-ec33-12-15-00.asp>. Accessed: March 23, 2002.

Sarkar, Dibya. "NECCC Releases E-Gov Guide." *Federal Computer Week*, (2000). Online. Available: <http://www.civic.com/civic/articles/2000/1211/web-ec33-12-15-00.asp>. Accessed: March 23, 2002.

Schneider, Steve M. "Political Portals and Democracy: Threats and Promises." *IMP Magazine*, (May 2000). Online. Available: http://www.cisp.org/imp/may_2000/05_00schneider.htm. Accessed: January 20, 2002.

Shields, Patricia M. "Pragmatism As Philosophy of Science: A Tool for Public Administration," *JAI Press*, (1998), pp. 215.

State of North Carolina. *e-NC: Connecting North Carolina to a Better Future*, <http://www.e-nc.org>. Online. Available: <http://www.beaufort.cc.nc.us/pdf/enc.PDF>. Accessed: April 7, 2002.

State of Iowa. *Intergovernmental Information Technology and Telecommunications Plan*. Online. Available: <http://www.state.ia.us/government/iitt/index.html>. Accessed: December 3, 2001.

State of Pennsylvania. *State-Wide, Single Point Access Portal*. Online. Available: <http://www.state.pa.us/PAPower>. Accessed: December 10, 2001.

State of Texas. Department of Information Resources. *Findings and Recommendations. E-Government Survey of State Agencies, Board, and Commissions*. Online. Available: http://www.dir.state.tx.us/egov/Surveys/Agency_Survey/Report_Body. Accessed: December 14, 2001.

State of Texas, Department of Information Resources, Electronic Government Task Force. *TexasOnline: A Feasibility Report on Electronic Government*. (November 1, 2000). Online. Available: <http://www.dir.state.tx.us/egov/report/finalrpt.htm>. Accessed: May 28, 2001.

State of Texas, Department of Information Resources. *Electronic Government Strategic Plan*. (January 2001). Online. Available: <http://www.dir.state.tx.us/egov/2001plan/egovplan.htm>. Accessed: October 5, 2001.

State of Texas, Department of Information Resources. "Internet Access Issues Involved in Electronic Government, White Paper, Electronic Government Task Force: Issues Subcommittee." August 2000. (computer printout.)

State of Texas. Office of the Lieutenant Governor, Advisory Council on the Digital Economy. *Bringing Digital Opportunity to All Texans*. (August 2000). Online. Available: <http://www.txdigecon.bus.utexas.edu>. Accessed: June 9, 2001.

State of Texas. *TexasOnline*. Online. Available: <http://www.texasonline.com>. Accessed: September 8, 2001.

Stines Francis, Denise. Director, State Grants, Office of Budget and Planning, Office of the Governor, Austin, Texas. Interviewed by Charmane Hayman on November 14, 2001.

Texas Comptroller of Public Accounts. *e-Texas: Smaller, Smarter, Faster Government*. Online. Available: [http:// e-texas.org](http://e-texas.org). Accessed: June 7, 2001.

Texas Senate Bill 974, 76th Legislature, regular session (2000).

Texas Senate Bill 1458, 77th Legislature, Regular Session (2001).

The Asset-Based Community Development Institute. *Institute for Policy Research, Northwestern University*. Online. Available: <http://www.northwestern.edu/ipr/abcd.html>. Accessed: October 19, 2001.

The Digital Divide Network. *What Do We Mean When Say 'Digital Divide?'* Online. Available: <http://www.digitaldividenetwork.net>. Accessed: December 10, 2001.

The Morino Institute, *Morino Institute Data*. Online. Available: <http://www.morino.org/>. Accessed: April 6, 2002.

Tichy, N. M., and M. A. Devanna. *The Transformational Leader*. New York: John Wiley, 1986.

Towns, Steve. "South Rising: North Carolina's IT Explosion Rests on a Solid Foundation." *Government Technology*, (2000). Online. Available: <http://www.govtech.net/magazine/gt/2000/nov/ncFeature/soutrising.p.html>. Accessed: February 9, 2002.

United States Department of Labor. *Labor Statistics March 2002*. Online.

Available: <http://www.bls.gov/news.release/empsit.t02.htm>.

Accessed: April 8, 2002.

Ventura County. "Appendix 2, Detail Policy Recommendations, Business Technology Committee." California. May 2001. (computer printout).

Ventura County, Board of Supervisors. "A Strategy for E-Government in Ventura County." California. May 2001. (computer printout).

Von Hoffman, Constantine. "The Critical Issue of Access: Unequal Access to Education and the Internet is an Obstacle on the Road to E-Government." *CIO Magazine*, (2001). Online. Available:

http://www.cio.com/archive/enterprise/111599_egov.html.

Accessed: April 8, 2002.

Welsh, William . "Governors Look to Ease Limits on Fed IT Funds."

Washington Technology, (2001). Online. Available:

<http://www.washtech.com/news/govit/7217-1.html>.

Accessed: July 10, 2001.

Whetten, David A., and Kim S. Cameron. *Developing Management Skills*. Massachusetts: Addison-Wesley, 1998.

Vita

Charmane Hayman is originally from Chester, PA. She has lived in various cities in the United States and countries abroad (Japan, Korea and Philippines), partly due to her involvement in public service for the past 15 years. She served in the United States Air Force, and continued her commitment to public service during her professional career in city and state government in Atlanta, GA.

She received her Bachelor of Science degree in Psychology, graduating with honors – *Magna Cum Laude*, from Georgia State University. Furthermore, other accomplishments include: Psi Chi - National Honor Society in Psychology, Golden Key National Honor Society, Phi Theta Kappa Honor Society, Ty Cobb Scholarship and Goff Fellowship. Currently, she is due to receive a Master's Degree in Public Affairs from the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin in May 2002.

She has many professional interests, which happen to be personal interests as well. Many of which have been demonstrated in policy research projects, *A Field Experiment in Family Uses of the Internet* and *Evaluating Community Technology Centers in Central Texas*. Her professional career interests are in community and economic development, non-profit management, education and small-business consulting. In addition, she engaged in volunteer community efforts which involved organizing the homeless for personal empowerment, tracking legislation for child welfare initiatives and tutoring children in underserved neighborhoods. Her desire is to effect change in communities, in politics, and in business.

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