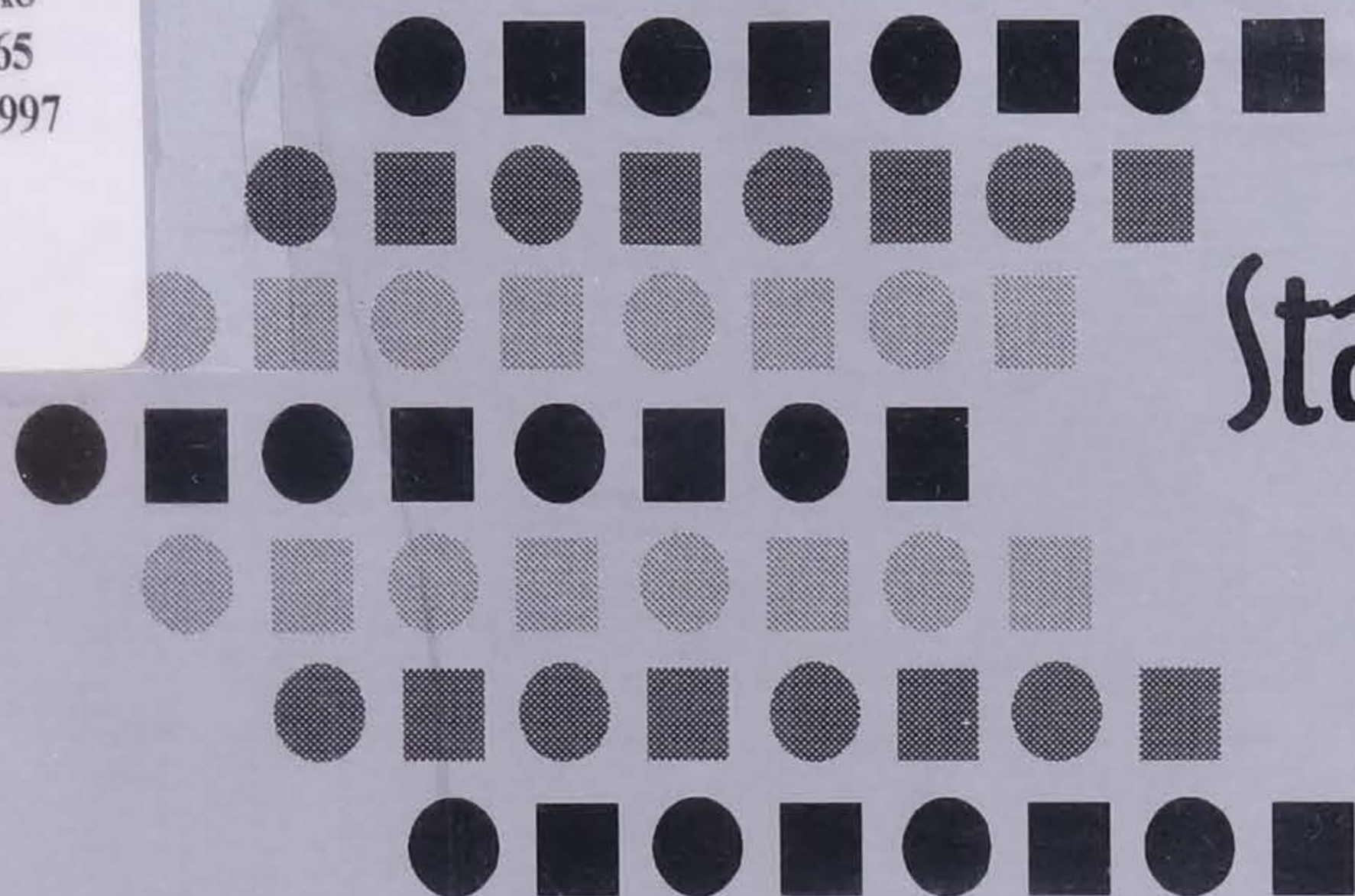# State of Iowa IITT Plan

Roadmap to a Responsive Government:

Using Technology to Create a Seamless Government

Prepared by

IOWA INTERGOVERNMENTAL INFORMATION TECHNOLOGY &
TELECOMMUNICATIONS (IITT) TASK FORCE

in cooperation with
THE STATE OF IOWA
US GENERAL SERVICES ADMINISTRATION
IOWA'S LOCAL GOVERNMENTS
FEBRUARY, 1997

Intergovernmental Information Technology & Telecommunications (IITT) Task Force

Edward J. Stanek, Ph.D. (Chair)
Commissioner, Iowa Lottery

Henry Lai (Vice-Chair)
Director, Center for Emerging Technologies, US General Services Administration

Bob Layton (Vice-Chair)
Administrator, City of Urbandale

Marty Adkins
Planning Leader, US Department of Agriculture

Mike Bladel
Scott County Sheriff

Glen Dickinson
Division Administrator, Iowa Legislative Fiscal Bureau

Cynthia Eisenhauer
Director, Iowa Workforce Development

Carol French Johnson
Director, Cedar Falls & Waterloo Libraries

David Hudson
Iowa Governor's Office

Tom Lynch
Management Analyst, US Department of Veterans Affairs

Charles Palmer
Director, Iowa Department of Human Services

Janet Phipps
Director, Iowa Department of General Services

John Sabo
Director, Electronic Services, Social Security Administration

Gen. Roger Schultz
Deputy Adjutant General, Iowa National Guard

Lee Tack
Administrator, Iowa Department of Education

Harold Thompson
Chief Executive Officer, Iowa Communications Network

Richard Varn
Director, Office of Telecommunications, University of Northern Iowa

Paul Wieck II
Commissioner, Iowa Department of Public Safety

John Wilkinson
Chief, Information Resources Management, Veterans Administration Medical Center

Jim Youngblood
Director, Iowa Information Technology Services

IITT Planning Group

Bill Morgan
Computer Specialist, US General Services Administration

Phil Smith
Director, Iowa Office for State-Federal Relations

Gretchen Tegeler
Director, Iowa Department of Management

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Acknowledgments

This plan is the product of a collaborative effort involving many individuals who worked both behind the scenes and at the forefront of this process. The IITT Task Force would like to express its sincere thanks to all of those individuals that played a part in the development of this document.

In particular, the Task Force would like to thank those individuals serving on the IITT planning committee for their early and ongoing assistance in shaping this plan and turning the conceptual into reality. Those individuals include Phil Smith (Iowa Office for State-Federal Relations), Gretchen Tegeler (Iowa Department of Management), Ed Stanek (Iowa Lottery), Henry Lai and Bill Morgan (US General Services Administration), Harold Thompson (Iowa Communications Network), and Jim Youngblood (Iowa Information Technology Services).

The Task Force would also like to thank the five IITT work group chairs -- Marty Adkins, Cynthia Eisenhauer, Charles Palmer, Janet Phipps, and Paul Wieck -- for their leadership in creating a foundation for the plan and providing insight into the most difficult issues faced by government.

The 98 individuals involved in the five work groups are to be commended for their diligence and commitment to this seven-month process. This effort benefited greatly from these individuals' wisdom, knowledge, experience, and varying perspectives.

Special thanks goes to the staff of the Iowa National Guard and the Iowa Communications Network, who assisted in planning meetings, supporting remote video connections, and making other arrangements. The Task Force would like to thank the Iowa National Guard for hosting the majority of meetings at its state-of-the-art facilities.

Citizens and other interested individuals could access minutes, agendas, and documents completed on the IITT Web Page. The Task Force appreciates the work of Lowell Sneller (Iowa Department of General Services) in the development and maintenance of the IITT Web Page. The availability of the voluminous information produced during this process was increased significantly because of the dependability and regular updating of the IITT Web Page.

Last, but certainly not least, the Task Force would like to express its appreciation for the comments and feedback provided by citizens on the process and the issues discussed. The comments received through electronic mail, the survey, and through the web page helped guide the effort to meet its ultimate goal -- to chart a course for citizen-centered government.

The State Public Policy Group provided staff support and technical assistance for the IITT Task Force and Work Groups. Additional support was provided by David Plazak (Resource Planning Associates) and Sandra McIntire (SETA Corporation).

PREFACE

The Iowa Intergovernmental Information Technology and Telecommunications (IITT) Task Force is pleased to submit this report to the Governor, the General Assembly, the Iowa Congressional Delegation, and the people of Iowa.

This process would not have been possible without the support and advocacy of the Iowa Congressional Delegation and the State of Iowa. As Iowa begins this process of reshaping government, the lessons learned, and the progress made, will have impacts to citizens living far beyond Iowa's borders.

Over the past ten months, Task Force members, representing federal, state, and local government and the private sector, laid a solid foundation for a new government - a government that will take the State of Iowa confidently into the next century.

This report suggests a course of action that the State should take in providing the platform for intergovernmental cooperation -- a virtual government that will eventually give citizens the opportunity to access a vast array of government services and information seamlessly, in their own homes, in their own communities, according to their own schedules.

Policy makers and government officials should take note that many of the recommendations challenge the traditional operations of government. This report encourages governments of all levels to work together and with the private sector, as they have done in the IITT process, to develop common solutions to meeting the needs of their common customer -- the citizen.

This report, and the five work group reports, promotes intergovernmental technology planning as a way to make government more efficient, effective, and responsive.

This report identifies the key issues and essential components of an intergovernmental technology plan, and more importantly, describes a vision for the state as it moves into the information age.

Because change is incremental for both individuals and institutions, this report marks the beginning of a much longer process to reshape government. On behalf of the IITT Task Force, we hope this report will focus discussions on how technology can be used effectively to bring government closer to the citizen.

EDWARD J. STANEK, PH.D.
Chair, IITT Task Force

TOM SLATER
President, State Public Policy Group

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EXECUTIVE SUMMARY

The world is changing rapidly and technology is playing a significant role in accelerating that change. Technology is changing the ways people interact with each other. The world of business has embraced the technological revolution, using increased efficiencies and response times to improve their services and products. Technology brings the world to the user, and ties businesses to the global economy.

As it has done in the private sector, technology is a tool which can help government transform itself. Government's role has been evolving for the last decade and citizens are beginning to demand a government that is responsive, efficient, and effective. Technology can help government do this.

However, before government can harness the power of technology, it must first have a new vision for the future. *This report is the first step in reshaping government's vision for the future.*

Bringing government to the people, ensuring that it is of the people, and directing it to act for the people can be facilitated by applying available technology in the public arena. The IITT Task Force has set about the development of a process to ensure government cooperation at all levels toward these ends.

Accomplishing the mission of the IITT Task Force places huge demands on all levels of government. It requires hard work and intensity by government leaders at all levels. As important is the involvement and participation of citizens and businesses as an equal partner in providing a more efficient and effective government in the future. **This process does not end with this report -- it begins with it.**

Government will continue to be expected to be more efficient, effective, and responsible to its citizens. Citizens will continue to demand that these expectations be met, and government leaders will continue to focus their efforts on meeting these expectations. Intergovernmental technology efforts can help meet these expectations in two primary ways -- it creates a virtual government for the citizen and it expands the capacity of government to provide services efficiently.

This report promotes the concept of seamless electronic government -- a responsive, "virtual" government that can be accessed by the citizen in their own homes, from their own communities, at their own convenience. This virtual government also allows a citizen to access intergovernmental and interagency information through one common entrance -- a common electronic service counter.

To meet this vision for the future, leaders from all levels of government must work together to incrementally break down barriers and build relationships. This vision needs to be perpetuated through a sustained intergovernmental effort if it is to succeed, and this report offers a roadmap on how to begin this process.

IITT Mission Statement

To prepare a roadmap that seamlessly employs the most cost-effective, consumer-friendly technology to facilitate official business by providing easy access among local, state, and federal governments and their citizens.

The IITT mission is noble, and reasonable. It reflects what most citizens desire -- the ability to access government and benefit from government services regardless of location or socio-economic status. It also reflects what governments want -- the ability to provide information and services effectively and efficiently. **The challenge for the future is to transform the mission into a reality.**

➤ **Support the Integration & Funding of Technology at All Levels.** The IITT supports the efforts of government to meet the needs of its agencies, departments, and personnel by integrating and funding technology.

➤ **Continue the IITT Process.** The benefits to intergovernmental planning are explicit in this report. Intergovernmental planning removes barriers and encourages cooperation.

➤ **The Task Force recommends that the IITT continue its mission as an advisory committee.** The Task Force membership should be expanded and the Task Force needs to develop a plan for the creation of a network of users to support the efforts of the IITT.

➤ **The Task Force recommends that the IITT implement the plan for the creation and development of a broad-based Intergovernmental Technology Network.** The broad network base will help facilitate projects and develop community solutions that involve the private sector.

➤ **Create the Base for Virtual Government.** Working together with local and federal governmental entities, government needs to take the lead to develop an Electronic Commerce and Citizen Information Network platform that will allow the virtual government to take shape.

➤ **Involve Citizens in the IITT process** by appointing a Citizen Advisory Group government agencies address the issues of access and privacy, educating and training citizens to use the virtual government, and involve citizens through focus groups and other evaluation mechanisms.

➤ **Encourage Intergovernmental Partnerships with the Private Sector** by involving private sector in project implementation, expanding IITT membership to include private sector representatives, encouraging private sector solutions, and involving the private sector in discussions about standards, interoperability, or electronic commerce platforms.

➤ **Integrate intergovernmental models & empower leaders** by identifying and accepting the risks associated with these innovations, empowering implementation teams and project leaders, and analyzing outcomes of projects to identify successes.

➤ **Encourage Innovation & Collaboration** by improving communications and developing budgetary incentives which encourage innovation and collaboration, and empower agencies to work together.

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New Vision for Government

Take time for a moment to indulge in a perspective-setting anachronism. Imagine being present at the side of one of the world's most powerful rulers. In the course of history there have been kings, czars, emperors, and pharaohs who held title to most of the known world and whose wealth was virtually unlimited. At their whim they held the power of life and death over enemies and subjects alike.

Despite the resources of the greatest of these potentates, could he have summoned his subjects and realized dreams which commoners today materialize on a whim? Could the pharaoh push a button to summon instantly before his eyes a dramatic production with a cast of thousands, then change it and change it again? Could he push a button and sample the sights and sounds of distant lands? Could he capture the latest sporting events on thin plastic film to be replayed at his whim? Could he compress the music of master composers and musicians onto shiny disks which when turned replay entire orchestra works beside his throne, while on camel back, or sailing down the Nile? Could the pharaoh make ice from water in the middle of the desert with one hour's notice or cook a sandwich in minutes without a match or fire? Could the Pharaoh's armies marshall swarms of chariots, each powered by 200 legless horses?

Only gods traversed the skies to cover great distances in a short time. The pharaoh's doctors did not respond to the magical numbers 911 and all the wealth of the kingdom could not buy a single minute on a wireless phone - even at off peak rates.

These powers are within the grasp of ordinary people in today's industrialized world. Some of the most powerful governments are democracies which elevate the ordinary citizen to access the unimaginable and impossible of days gone by. Great strides have been made in harnessing technology to master business, and to simply amuse the idle mind. The citizens which have assimilated this technology have only recently come to understand the implications that technology may have for delivering services to those who need or rightfully demand them.

Governments are now exploring how access to food, shelter, and clothing can be moved from mighty treasuries to accounts of the needy in a matter of minutes with little chance for error or larceny. A vast array of government functions are being examined at all levels to assess known technology for new purposes.

Until now, vital records have been maintained manually. A citizen wishing access to an official birth certificate must communicate with an official either in writing or in person in order to obtain a copy. The text for the image itself can be digitized and accessed from a variety of

computer keyboards once new technology is implemented. It may be routine someday to receive a copy from a kiosk or the Internet while electronically transferring the funds to support the service by means of electronic banking. Someday when arrests are made in a jurisdiction far removed from where a crime is committed, there will be an exchange of criminal history data, physical images, and even fingerprints through wires to authorities that need the information to do their duty. Instead of centralizing this information in computing powerhouses, the information can be downloaded to the level of individual officers enforcing the law in their own moving vehicles. Town meetings can receive greater attendance by scheduling them via two-way video transmissions which require a meeting of the minds as opposed to a meeting of the bodies. Rules and laws can be reviewed by anyone with access to today's electronic media, while polls or votes can be taken to remove doubts about the public mood.

Bringing government to the people, ensuring that it is of the people, and directing it to act for the people can be facilitated by applying available technology in the public arena. Simplifying record keeping, processing information and doing accounting with greater efficiency and access can be implemented through the application of the public will and resources. The IITT Task Force has set about the development of a process to ensure government cooperation at all levels toward these ends. The process will need to be refined, but the wherewithal has been mustered to make as its mission to help government boldly serve as no one has ever served before. . .

Edward J. Stanek, Ph.D.
Chair, IITT Task Force

While technology is typically accessed by pressing computer keys or moving a computer mouse, accomplishing the mission of the IITT Task Force demands the expenditure of huge amounts of energy and the commitment from all levels of government. It will require dedication and intensity by government leaders at all levels. As important is the involvement and participation of citizens and businesses as equal partners in providing a more efficient and effective government in the future. **This process does not end with this report -- it begins with it.**

Government will continue to be expected to be more efficient, effective, and responsive to its citizens. Citizens will continue to demand that these expectations be met, and government leaders will continue to focus their efforts on meeting these expectations. Intergovernmental technology efforts can help meet these expectations in two primary ways -- it creates a virtual government for the citizen and it expands the capacity of government to provide services efficiently.

First, intergovernmental technology enables the creation of a virtual government, a seamless system that allows electronic access to multiple levels of government at a single time. Intergovernmental technology efforts allow information, communication, commerce, and data to be linked together and accessed by government agencies and citizens through a common electronic portal. Efforts such as these can unite government services and

simplify interactions for the citizen, who wants to access government at their own convenience, on their own terms, and according to their own schedules. Technology allows this to happen, and it allows it to happen in a way that simplifies the lives of citizens.

Secondly, intergovernmental technology expands the capacity of government to meet the needs of Iowans. Devolution, block grants, and the possibility of a balanced budget amendment mean that government will need to reshape the way it does business by reducing duplication, working collaboratively, and directing resources appropriately.

Intergovernmental technology can bring together the broad array of local, state, and federal government agencies and organizations to solve common problems and create common solutions. This process of coming together has the potential to benefit sectors of government far beyond what is currently conceptualized. Technology can help government respond to the challenges of the future.

Technology is a powerful tool for government and citizens. Government is challenged to use the power technology offers in ways that directly benefit the citizen, while ensuring that expediency and cost effectiveness do not override the issues of privacy, access, and convenience for citizens. Technology allows government to deliver services in new ways, and meet the increasing needs and demands of its citizens. Using technology to meet the needs of citizens and government requires careful planning, as well as the development of organizational structures that understand customer service and service delivery.

To succeed in its effort, government must become more responsive, flexible, resilient, and agile. Excuses like "government is a bureaucracy" or "government moves slowly" can no longer be tolerated at any level. Government is being challenged to recreate itself. Citizens and policy makers alike want to see government succeed, and technology is one of the tools that can make this happen. Success is dependent on government taking the initiative to begin the process.

Finally, this process must involve citizens in creating and achieving this new vision for government. Inviting citizens to participate in planning for intergovernmental technology will help government understand and respond effectively to citizen needs. Citizen involvement will ensure that the use of technology to create a virtual government will be accepted as a means to make government work better.

This report promotes the concept of seamless electronic government -- a virtual government that can be accessed by the citizen in their own homes, from their own communities, at their own convenience. This virtual government also allows a citizen to access intergovernmental and interagency information through one common entrance -- a common electronic service counter.

To meet this vision for the future, leaders from all levels of government must work together to incrementally break down barriers and build relationships. This vision needs to be perpetuated through a sustained intergovernmental effort if it is to succeed, and this report offers a roadmap on how to begin this process.

Iowa is charting its own course by beginning this planning process. No other state has undertaken an enterprise-wide, intergovernmental approach to technology planning. The lessons learned, and progress made, will have impact on citizens living far beyond the confines of the state.

BACKGROUND

The world is changing rapidly and technology is playing a significant role in accelerating that change. Technology is changing the ways people interact with each other. Virtual reality, full-motion video, and the Internet are changing the way people perceive the world around them.

The world of business has embraced the technological revolution, using increased efficiencies and response times to improve their services and products. Technology brings the world to the user, and ties businesses in to the global economy.

As it has done in the private sector, technology is a tool which can help government transform itself. Government's role has been evolving for the last decade and citizens are beginning to demand a government that is responsive, efficient, and effective. Technology can help government do this.

However, before government can harness the power of technology, it must first have a new vision for the future. **This report is the first step in reshaping government's vision for the future.**

Over the past several years, the State of Iowa has been presented with an exciting opportunity. The state-owned fiber optic network, the Iowa Communications Network, has become an important resource with vast implications to government performance. Iowa's private sector infrastructure is extensive and, with more than 100 telephone companies, very diverse.

The state's technology infrastructure has caught the attention of the federal government, which has invested a large amount of time and resources in a series of pilot projects. These projects are demonstrating how government can make itself more accessible to its citizens and customers, while increasing its own internal efficiencies.

Realizing that telecommunications can improve citizen access to a wide range of services regardless of their location, the Iowa Department of Management decided to step up its information technology planning efforts and make Iowa a model for the nation.

But government is not a singular entity. State government is comprised of many elements, some of which have competing interests. With over 1,000 cities and counties, Iowa's local governments are very diverse and have their own parochial concerns. Biggest of all is the federal government, with its regions and state offices. Each level of government has its own responsibilities and is charged with providing its own services and information.

While all levels of government are unified by a single force -- the citizen -- they are not structured to effectively interrelate. The "silo" systems encourage vertical integration, most frequently moving policies from the top - down. There are very few coordinated efforts to integrate laterally, and such an initiative is very challenging.

With the onset of welfare reform and the promise of block grants, government processes will become more integrated and the need for cooperation among the levels of government will become imperative. As programs are integrated, government needs to respond to its common element -- the citizen.

Technology can help government meet this challenge of program integration and simplification. By developing new models for service delivery and customer service, government can perform more responsively, effectively, and efficiently.

The United States General Services Administration (GSA) has presented Iowa with a tremendous opportunity. While a handful of states have formed intergovernmental groups around the administration of a specific project, none have undertaken the enterprise planning approach prompted by the State of Iowa and several federal agencies.

In partnership with the Federal government and several local governments, the State of Iowa led the effort to bring all layers of government together to begin the process of reshaping governmental processes using technology as a backbone.

The Intergovernmental Information Technology and Telecommunications (IITT) Task Force was appointed by the Iowa Department of Management to develop an intergovernmental technology plan that includes new models to bridge local, state and federal government.

The IITT Task Force was directed to look for new, efficient ways to bring services (both transactional and information) more directly to Iowa businesses and citizens. The State of Iowa and GSA asked the Task Force to develop a plan around three primary principles.

.... **Improve citizen interaction with their government**. Technology can make information and direct services more accessible to people located in both rural and urban areas. As Iowans become more comfortable with and dependent upon technology, they will expect government to utilize technology to provide more accessible information and more efficient services. Technology allows government to become the gateway to on-demand electronic information and services.

.... **Coordinate State, Federal, and local information planning efforts**. The ultimate goal is to develop an overall government technology plan which fits together with federal and local plans, identifies opportunities for shared projects, and ensures interconnectivity. All levels of government have the same goal - to efficiently provide universally accessible information and services to its citizens. Information technology can assist governments in meeting this goal. By working together in the planning process, all levels of government will move in the same general direction and may find opportunities to work together.

.... **Determine how technology can move Iowa forward.** Technology can provide the tools to make government work more efficiently, enable services to be delivered more effectively, and create a government that is more accessible to all individuals. Security, reliability, accessibility, government efficiency, customer-centered service, and intergovernmental opportunities are all common themes in this process.

This ongoing effort will allow the State to direct valuable resources where they are most needed and see the direct impact of that investment on Iowans' ability to access government services and information.

These objectives can only be successfully achieved through a sustained intergovernmental effort. The IITT Task Force was charged with beginning the process of identifying opportunities for:

➤ Developing a common vision based on cooperation, coordination, and collaboration

➤ Sharing a common infrastucture and architecture

➤ Identifying barriers to Information Technology (IT) partnerships

➤ Creating new models

➤ Promoting the policies and priorities of government

➤ Building capacity and coalitions

This report represents the beginning of an ongoing process to determine ways technology and telecommunications can help government meet its vision for the future. This report suggests a roadmap to get there. It is constructed to offer a brief analysis of the issues discussed in depth, and present a plan to moving government forward.

STRUCTURE OF THE IITT EFFORT

IITT Task Force

The Intergovernmental Information Technology and Telecommunications (IITT) Task Force was appointed by the State of Iowa to develop an intergovernmental technology plan. The Task Force was comprised of stakeholders working on technology issues at the federal, state, and local levels. The charge of the Task Force was to create a plan to provide an electronic government network that would enhance services to businesses and citizens, as well as streamline government services across federal-state-local lines.

The Intergovernmental Information Technology & Telecommunications (IITT) Task Force was the guiding force for this process. The IITT Task Force is chaired by Ed Stanek, Commissioner of the Iowa Lottery and a veteran in technology and telecommunications planning. The IITT Task Force's federal and local government vice-chairs -- Henry Lai, Director of the Center for Emerging Technologies in the General Services Administration and point person for the federal pilot projects in Iowa, and Bob Layton, the City Administrator of Urbandale, Iowa.

The Task Force was selected to represent key individuals from all levels of government. A conscious effort was made to include individuals who were decision makers, with the power to direct their own areas toward an intergovernmental approach. These individuals are innovators in their own fields and bring unique governmental perspectives to the process.

...... State Government Members ......

Edward Stanek, Ph.D. (Chair)
Iowa Lottery

Glen Dickinson
Iowa Legislative Service Bureau

Cynthia Eisenhauer
Iowa Workforce Development

David Hudson
Iowa Governor's Office

Charles Palmer
Iowa Department of Human Services

Janet Phipps
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Tom Lynch
US Department of Veterans Affairs

John Sabo
Social Security Administration

John Wilkinson
Veterans Administration Medical Center

······ **Local Government Members** ······

Bob Layton (Vice-Chair)
City of Urbandale

Mike Bladel
Scott County Sheriff

Carol French Johnson
Cedar Falls & Waterloo Libraries

Work Groups

The IITT planning process identified five primary areas of review, and five work groups were appointed to complete an in-depth, targeted review of these specific issue areas.

The IITT Task Force recognized the need to target efforts on these five general areas of government processes in order to provide the eventual base for more specific, and equally important, areas such as education, the environment, transportation, and public health.

While a separate work group was not assigned to these specific issue areas, the work groups did address these issues, and many more. For example, education and public health interests were represented on the human resources work group, and issues pertinent to these areas were discussed.

The work groups gave a broad range of public, private, and governmental representatives input into the State's technology planning efforts. The variety of perspectives represented in the work groups helped widen the scope of the process and create a balanced assessment of government technology opportunities.

Over a seven-month period, each work group engaged in a consistent format for review. These reviews were written to be independent and self-supporting, and have been included in this plan for detailed reference. The concepts presented in this report are based on the findings and recommendations of the work groups, and could not have been fully developed without the accomplishments of the work groups.

Work groups were asked to develop goals and measurable outcomes, and identify barriers (and ways to address those barriers) to these goals. Work groups focused on ways to reshape government service delivery to create a responsive government that addresses the needs of citizens and other government customers.

The work group reports form the background and basis for the issues reviewed, and the roadmap presented, in this plan. The five work group reports, as well as a comprehensive list of the work group members, are independent documents, separate from this report.

······ **Criminal Justice and Public Safety Work Group.** This work group looked at the unique needs of law enforcement, criminal justice, public safety, and disaster services agencies. The scope of the work ranged from accessing data sources to facilitating criminal investigations.

.... **Electronic Commerce Work Group**. This work group focused on government services which can be provided electronically to individuals and businesses, including tax and accounting information, wage reporting, license or permit information, economic and trade data, regulatory information, electronic benefits, and housing/real estate data.

.... **General Government Work Group**. This work group explored opportunities to develop systems which maximize the use of shared facilities and provide to customers a seamless, cost-effective, user-friendly government. Opportunities to meet these objectives that were discussed included a government-wide electronic mail service, a shared government procurement system, a shared telecommunications service, the feasibility of local and state access to FTS2000, security and privacy, interoperability, Internet services, a Directory of Government Services, training, and capacity building.

.... **Geographic Information System (GIS) Work Group**. The use of the GIS has grown in importance to several governmental agencies. This area shows much potential for various environmental programs, agriculture needs, disaster services, and transportation planning. This work group focused on developing a plan for expanded uses of the GIS by multiple agencies.

.... **Human Services Work Group.** This work group focused on some of the most difficult issues facing the state. Such themes as integrating information systems, protecting client confidentiality, and using telecommunications services and information technology both as a management tool and as a means to deliver services were explored.

The work groups all followed a standard, consistent format to methodically review the ways government technology can positively and negatively impact various users and individuals in government. The work groups all followed the format below:

➢ Environmental Assessment

➢ Work Group Goals

➢ Barriers to Work Group Goals (& Resolutions to those Barriers)

➢ Impact on Iowans

➢ Impact on Personnel

➢ Standards/Interoperability

➢ Existing & Emerging Technology

➢ New & Existing Relationships

➢ Private Sector Involvement

➢ Resources Available & Needed

➢ Economic & Social Impacts

➢ Intergovernmental Opportunities

➢ Project Recommendations

Each work group recommended three to five projects that will move government forward in meeting its goal of a seamless government. These projects met the following criteria:

➢ The project is realistic and has a reasonable chance for success

➤ The project can be fully operational within five years

➤ The project involves more than one level of government

➤ The project uses interoperable technology

➤ The project includes measurable benchmarks of success

➤ The project improves services to citizens or makes government more efficient

IITT Task Force Mission

The Intergovernmental Information Technology and Telecommunications (IITT) Task Force developed the following mission to reshape government using the tools of technology.

This mission combines many of the objectives of this process -- to create a roadmap for the State of Iowa, to reinvent governmental services, to encourage intergovernmental collaboration, and to use technology to focus on citizen needs. The following is the mission of the IITT Task Force:

To prepare a roadmap that seamlessly employs the most cost-effective, consumer-friendly technology to facilitate official business by providing easy access among local, state, and federal governments and their citizens.

IITT Goals & Strategies

To achieve its mission, the Intergovernmental Information Technology and Telecommunications (IITT) Task Force detailed four goals, and a basic strategy to meet those goals.

The IITT Task Force goals express the basic need to respond to the changing nature of interpersonal communications and the role of government in a technologically advanced future. These goals are:

...... Improve customer interaction through public-private partnerships

...... Coordinate state, federal, and local technology planning efforts

...... Create a vision for intergovernmental use of technology

...... Leverage technology to create a seamless, efficient, effective, and responsive government

The basic strategy to achieve these goals mirror the Task Force structure. A longer term strategy emerged as the IITT Task Force became more familiar with the issues, policies, and barriers that impact customer service and citizen access to government.

This longer term strategy is outlined in the Roadmap section of this report. However, the short term strategy imposed by the IITT Task Force was to:

➤ Appoint an intergovernmental task force to recommend a technology plan that:

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- Prioritizes goals and objectives

- Develops a customer-driven approach to government services

- Identifies opportunities for intergovernmental cooperation

- Identifies opportunities for shared resources

- Reduces interagency and intergovernmental redundancy

- Examines government infrastructure at all levels

- Recommends specific projects that suggest new intergovernmental models

- Identifies barriers to deployment of recommended projects

- Identifies barriers to citizen interaction with government

- Develops a plan to address barriers

- Suggests a mechanism for ongoing cooperation

- Recommends a long-term strategy to support the plan

- Identifies the technological tools needed to make this transformation

- Identifies realistic steps which begin the process of transforming the way government conducts business with its citizens

➤ Establish five work groups to involve a broad range of individuals in the development of a report which implements the goals and vision of this project in their specific issue area.

CITIZEN VISION FOR GOVERNMENT

It would have been very easy for the IITT Task Force -- a group of individuals that are employed by some level of government -- to look around the table and develop a set of recommendations that reflects nothing but their own attitudes toward technology and the role of government in the future.

The IITT did not do that. The IITT Task Force recognized that the world is in a state of transformation as it moves out of the Industrial Age into the Information Age. The technological revolution is in the process of changing how citizens interact with each other, and how corporations conduct business. But this transformation is not predicated on citizen acceptance -- it is simply happening.

For this reason, the IITT Task Force wanted to first understand the perceptions of the public about the use of technology by government. As government moves forward, it needs to understand the concerns of its citizenry and the ideas that they have for the role of government in the future.

Citizen Survey

The IITT Task Force asked more than 5,000 *(actual response rate was 7%)* citizens what direction government should take in using technology to provide more convenience in making government transactions and in accessing government information.

The survey responses were analyzed by a nationally recognized communication research firm -- Selzer Boddy, Inc. The following is a review of the findings documented in the Selzer Boddy summary. A complete copy of the Selzer Boddy summary is attached to this report. There were several common themes that emerged from this survey.

.......**The use of technology varies greatly among citizens, but the reasons for using it are focused -- it saves time, money, and resources.** Citizens want what they need in order to do their jobs better and more efficiently, and their jobs vary. Citizens want to use telecommunications technologies because they conserve time, save money, boost efficiency, offer top quality information, enhance communication and access, and decrease paperwork.

.......**Telecommunications technologies have almost universal appeal.** Two-thirds (67%) of the survey respondents indicated that it is very important to incorporate technology tools into their work. Another 23% say that it is fairly important to do so, leaving virtually no one (2%) who says that telecommunications technologies are unimportant.

.......**Online telecommunications technologies are the most popular.** Two-thirds of the respondents currently use e-mail (66%) or the Internet (64%). Not only are online tools the most used today, but respondents envision using them even more tomorrow. When asked which technologies they plan to use in the next three years, the vast majority of respondents say they will incorporate Internet resources into their work.

• **Video conferencing is one of the resources with the most potential**, according to respondents. Currently, only 26% of the respondents are using the electronic meeting medium, but in the next three years, 45% intend to conduct business in the electronic boardroom.

• **Businesses recognize the competitive advantage of using telecommunications technology.** Citizens that work for the private sector report the highest usage level of telecommunications technology. Only 5% of businesses reported that they do not use what they would call telecommunications technology. Businesses are using online technologies (voice mail, e-mail, web pages) and electronic commerce (direct deposit, ATM, tax filing) prolifically.

• **Government lags behind.** One-in-five (21%) of the respondents from local, state, and federal governments say they currently do not use telecommunications technologies. E-mail is the only technology used by the majority of government respondents (55% use it). The majority of government respondents (57%) consider themselves either low level users (34%) or non-users (23%).

• **The biggest obstacle is cost.** When asked what stands in the way of using telecommunications technologies, the bottom line demands justification. A third of the respondents (35%) say the cost of the equipment is one of their reasons for not using technology to a greater extent, while another third (33%) indicates the cost of service is prohibitive. Other reasons for not using technology include the lack of training (17%) and not knowing how to use the tools (11%).

There has been much discussion on the availability of certain types of technology throughout the State. Only 10% of the respondents indicated the unavailability of technology was their primary barrier to use.

• **The higher the use, the less cost is a factor.** As respondents compile more experience with electronic communications, cost becomes less of an issue. Only 19% of the heavy users indicated that cost was too high, while 26% of the mid-level users, 40% of the low-level users, and 51% of the non-users said the same.

• **More will conduct governmental business electronically as long as it meets certain criteria -- *exchanges need to be easy, affordable, and secure.*** At one point in this survey, respondents are asked if they would file reports, complete transactions, and access information if government offered an electronic option. The clear answer was yes -- 51% have no hesitation about it, and only 8% would decline.

Another 21% placed conditions on their use of technology to conduct governmental business. Reading through these conditions, most cluster around three themes -- the system must be easy to use, it must be secure, and it must be affordable.

• **Government should offer services electronically -- and provide education to the public on its use.** Few respondents have any problem with government offering services and information electronically. In fact, the vast majority (82%) say that such a role is proper for government. Furthermore, eighty-four percent

(84%) believe that government ought to educate the public about what is available electronically and how such a system can be used.

These findings suggest some communication strategies for expanding the role of telecommunication technologies in governmental affairs. The IITT recognized that simply offering services is not enough -- government must also market those services and provide training and educational materials that demonstrate its convenience. Several insights are offered below:

1. **Emphasize the competitive advantage -- productivity.**
   Those who currently use telecommunications technology do not need to be sold on the benefits. People with less experience, however, may need some help in justifying the up-front resource expenditures necessary before the benefits become apparent.

   If telecommunication technologies are an investment, it would appear a sound one. Those who have already made the investment are the most eager to invest more.

   The IITT has discussed the need to address the "haves vs. have-nots" issue by providing public access points that are free of charge. This access will give many non-users the exposure they need to understand the benefits of technology, and see the bottom-line benefits to investment in technology.

2. **Educate on the basics.**
   While many of the respondents do not need to be sold on the benefits of technology, technology itself should not be the barrier to use. Technology needs to be accessible and easy to use.

In other words, the media is not the message.

Respondents do not necessarily want to be online -- they want the information and the speed and the access that being online can give them.

3. **Let the experienced lead the way.**
   Those with the most telecommunication technology experience are the most enthusiastic about expanding their use and the least concerned about potential obstacles.

   The stories they might tell, the teaching they might do, and the insights they may have can prove to be a tremendous resource in creating an electronic town square.

4. **Focus on government.**
   Access to government services and information predicates the need for government entities to move closer to the pack in terms of their current and planned use of technology. If government lags too far behind, it will become the excuse for others to slow down.

5. **Surf the Internet & use the electronic boardroom.**
   Online services, like e-mail and the Internet, currently hold the dominant position among telecommunication technologies. Their advantage may be the flexibility and seemingly unlimited potential of the system.

   It seems online is where much of the enthusiasm for the future originates. Government should take advantage of this energy, but should not overlook the potential of video conferencing. If equipment and service costs can be overcome through competition, respondents express an affinity for this technology.

IITT Web Page

The IITT Task Force discovered that the vast majority of citizens did not understand how technology investments of government directly impacted the types of services offered to them.

The first step in this process was to provide information about what the IITT Task Force was doing, and the direction the State of Iowa was taking in making a commitment to intergovernmental planning and electronic government access.

The IITT Task Force did not have the resources to provide all local governments, state and federal agency personnel, and interested citizens with the volumes of information presented and reviewed during this process. However, the Task Force recognized the need for this information to be available upon request or through the use of the very technology being promoted in this report.

The IITT Task Force determined that a web page was an appropriate and efficient way to communicate with the multitudes of interested individuals. The IITT Web Page can be reached via the State of Iowa home page located at http://www.government.state.ia.us/, and has links to a variety of federal and local pages.

A number of national technology groups, looking at how Iowa progresses in its intergovernmental task, have also provided links to the IITT page. The IITT Task Force and staff received feedback from individuals accessing this page, and used these comments to improve the page and information contained in it.

As of February 14, 1997, the IITT Web Page has been accessed by 1,313 interested individuals. This number is expected to increase dramatically once the reports are posted. Suggestions and recommendations made by citizens accessing the web page were also used to add value to the work group review process.

Journalists have also provided coverage of this process, with hopes of increasing citizen awareness to the opportunities presented by technology. The Des Moines Register, which has statewide circulation, printed a front page article on this process and included the electronic mail address of IITT staff.

The article solicited ideas from citizens on what government services and information should be provided, and what types of projects government should look at pursuing. These comments added value to the work group process. A copy of this article is attached to this report.

Operational Issues

The IITT Task Force and its five working groups identified several issues which had intergovernmental and enterprise-wide implications. These issues were addressed independently and at length in each work group report. However, each work group put their own "spin" on the issue as it pertained to their subject area.

For this reason, the IITT Task Force acknowledged the need to compile these concerns and considerations and recommend a unified course of action. The five following sections address the universal issues of:

...... **Access to the Electronic Government.** A seamless, electronic government (or a virtual government) must be accessible to all customers. Not all customers have access to a personal computer, Internet access, or other technology needed to gain access to the virtual government. Likewise, not all customers have the expertise to use technology if it is made available to them. For this reason, government must designate community access sites where a virtual government terminal is available to citizens at no cost, are simple to use, and provide supports for customers unfamiliar with technology.

...... **Privacy & Security.** There are those citizens that will applaud efforts to create a virtual government. However, there are many others who believe that easier access to services and information will compromise their privacy and threaten the integrity of the information contained. To many, technology is unreliable and confusing. However, privacy can be protected in an electronic environment. To be successful, government must communicate these protections to build public confidence in a virtual government.

...... **Customer Service & Service Delivery.** The way government provides services is as important as the services themselves. The technologies used, the presentation of the information, and the places customers go to get services are all issues that must be addressed in crafting a service delivery system that works for both government and citizens.

...... **Interoperability.** Intergovernmental cooperation and the creation of a seamless government is predicated on the ability of systems to interact and be interoperable. Interoperability is vital for government and citizens to communicate and interact effectively, efficiently, and with security. Without interoperability, the goal of a seamless government is out of reach.

...... **Return on Investment & Quality Assurance.** Intergovernmental efforts must be sustained to be effective, and efforts to create a seamless government must follow a business plan that makes sense. Government must document that technology is helping government's bottom line, has positive outcomes, and is fulfilling its purpose.

The issues outlined in these sections provide the framework for the approach taken in this process and the roadmap recommended in this report.

Access to the Electronic Government

Citizens currently access government services and information in a number of ways. Electronic access to the state home page allows citizens with computers to obtain a limited amount of information. The vast majority of local governments do not have web pages, or online listings.

The majority of government transactions and information exchanges continue to occur through traditional avenues -- through the courthouse, at the State Capitol, by phone, or in person. While citizens can file their income taxes electronically and have their returns automatically deposited in their bank accounts, they are not able to obtain a certified copy of their birth certificate without a formal request and results are far from immediate.

The current system is predicated on the citizen (or customer) coming to government -- not government going out to the citizen. The system is highly centralized, but not coordinated.

While an individual may change their address when filing their state and federal taxes, local governments and other state and federal agencies are not notified of that change. Information is not shared or linked within or among the levels of government.

The IITT Task Force was charged with creating a new service system that is responsive to the citizen, and makes government exchanges easy and convenient for the citizen. Technology is a cost effective tool that can help government meet this challenge and create a virtual government that is responsive to the needs of the citizen.

Using Technology to Enhance Citizen Access to Government

A virtual government -- a seamless, electronic government accessible to any citizen with access to a computer or public access terminal -- is the vision that the IITT Task Force has outlined for the future. Unfortunately, computers are still a luxury for a large segment of the population and not everyone has equal access to high speed, on demand Internet services.

Government cannot simply create a network, and assume that it will be used. The "build it and they will come" philosophy will only work for a small portion of society. It is the proper role of government to ensure that access to such a network is available to any Iowan who needs access -- not only those with a home computer and Internet service.

As discussed in this section, access is the ability of customers to interact electronically with government in order to obtain information, assistance, and services. Two primary factors that impact citizen access:

➢ The availability of "community access points," or publicly accessible electronic access points that allow a citizen to obtain government services, information, and assistance at no cost in their communities.

➢ The more esoteric need for the customer to be comfortable using these access points.

Government has the obligation to provide basic services and information equally to all it citizens, regardless of where they live or their financial status. Community access points can ensure that citizens without home computers or Internet access are not excluded from the convenience of a virtual government.

However, government has little control over the second issue. The virtual government will be used by many citizens if, as the IITT survey indicates, access is easy, affordable, and secure.

The tools used and the format of the information presented will factor heavily into this issue. Customers will decide to access the virtual government if the system meets their needs, is easy to use, is affordable, and gives them greater benefits than more traditional methods of accessing government services.

It is important to note that the perceptions of citizens are of equal concern to government, as they move forward in the creation of new service delivery methods. Many citizens will want to continue accessing services through traditional means.

Citizens may want or need the personal interaction with a government employee, and feel that the benefits of personal contact override the convenience of a virtual government.

For this reason, the IITT Task Force focuses on multiple and integrated methods for accessing government services. Citizens need to be able to choose how they want to interact with government -- government needs to begin providing that choice.

Citizen-Friendly Access

Citizens will not access a virtual government if it does not meet their needs. All aspects of the virtual government must be designed to be customer-friendly, including the technology used and the presentation of the information. That means government must be cognizant of customer needs when designing and implementing the system.

Citizens have several concerns that may impact their use of a virtual government. Cost is a huge factor in whether individuals use technology. For this reason, access should not be limited by cost.

Public records statutes allow the public free access to public records. Fees can only be charged for printing copies of the information accessed. The access to virtual government services and information must also be free. Public access sites should be able to charge a nominal fee for print-outs or copies made of the information obtained, and governmental entities should continue to be able to charge for the services it renders electronically (i.e. the cost of a certified copy of a birth certificate). However, these fees should be no more than what would be incurred in traditional delivery forms -- and could even be less costly as an incentive for using this efficient system.

Access cannot be dependent on an individual or business owning a personal computer or having Internet access. Internet access is not available equally throughout the state -- cost, access, speed, and capacity vary. Personal computers, while having declined in price, continue to be out of reach financially for many citizens in the state.

Citizens may be afraid of technology or have little experience in using it. The technology used and the presentation of the information in a virtual government must be easy to use, and technical assistance should be available at the virtual government access site. An easy-to-use system, combined with access to a "help desk" or some other assistance, will help alleviate customer fears and help them understand the benefits of electronic exchanges.

Buildings are now required to be accessible to individuals with disabilities. Likewise, this virtual government needs to make sure that access for populations with special needs -- people with disabilities, visual and hearing impairments, elderly, and non-English speaking customers -- is addressed in the design of the system, the types of technology used, and the physical layout of the access site.

Customers want the added convenience that a virtual government offers -- expanded service hours, access to multiple levels of government through a single point of entry, and real time results.

Despite these conveniences, customers will be reluctant to access a virtual government if the system is not secure or the technologies used to ensure security are not communicated to the citizen. The citizen will want to make sure that private information about themselves is kept private. Citizens will want to understand how the integrity of the information submitted and obtained is assured.

Customers need to be able to get information, assistance, and services from government when they need it, regardless of where they are located, the time of day, or the agency or level of government that provides the service. Access must consider the customers' needs for convenient, accurate, quick, affordable, secure, and reliable government services. Locating access points in public areas, providing expanded service hours, and making applications very simple to use are critical to addressing customer access needs.

The IITT Task Force survey reconfirmed what the work groups found was true -- access issues must be addressed in the design of the virtual government. This includes the design of where the person accesses the virtual government, the types of technology used to access the virtual government, and the virtual government itself.

The Haves and the Have-Nots

Generations of Iowans grew up without computers, calculators, or in some cases, telephones and televisions. Technology can divide people into the haves and the have-nots based on a number of technology-related factors that include knowledge, experience, equipment, and resources.

Knowledge about technology is relatively recent, and many adults remain uncomfortable with technology because of their lack of knowledge and understanding. This in itself can create a separation among customers and impact their access or perceived access to a virtual government. Reluctance to using technology can easily result, even when simple, step-by-step instructions or technical assistance is available.

Expertise is also a dividing point. Technology use is a slippery slope. Those who have some expertise in technology tend to be more familiar and comfortable with using new types of technology and services. Their expertise continues to

increase and their abilities to use technology builds exponentially. This eventually widens the gap between the expertise haves and have-nots.

Equipment also divides customers -- citizens, businesses, and government personnel -- into clear have and have-not groups. Those fortunate enough to have computers, modems, Internet access, databases, and video conferencing equipment have an advantage over those who do not own such tools.

Many local governments in Iowa are thrown into the "have-nots" category because they have fewer resources than other levels of government, and the use of available resources may be restricted by laws or policies.

High costs of technology coupled with local government lack of access to low-cost ICN services combine to increase the cost of local government participation in shared projects. Likewise, some state agencies have many more resources committed to technology than others.

Government needs to assure access to all customers regardless of whether they own equipment and connections to access the system independently. The gap between the haves and have-nots could easily and quickly widen without careful attention in designing the virtual government. The issues are not simple, but will be more effectively addressed with participation and input from citizens and business and government customers representing both the haves and the have-nots.

Avenues for Customer Access

Citizens want easy, free, secure, and convenient access to government services and information. How they obtain that access is as essential as what they are accessing. Understanding customer needs and concerns, and addressing them in the design of the virtual government system, is the only successful way that government can obtain customer acceptance.

Government needs to outline the current path a customer takes in accessing services and information. This path should be streamlined as much as possible, and then technology should be incorporated to deliver the service in the most efficient and effective manner for the customer. The best avenue for the government is not always best for the customer, and access must be driven by what is best for the customer.

Not all customers will want a virtual government. Many will want to continue to obtain services and information through traditional methods.

Customers need to be able to choose the ways they want to interact with government -- either through a computer, a public access terminal, or at the courthouse. Government needs to continue to retain traditional service delivery -- or risk many citizens permanently losing contact with government.

Within the realm of technology, different types of technology are better for certain customers and certain services. Government needs to work with customers to identify the best means of access for specific purposes -- and deploy them in a planful way.

Intergovernmental and interagency coordination in designing community access sites and the structure of the virtual government is imperative. Without coordination, agencies and governments may duplicate efforts and deploy incompatible technologies which

confuse the customer and thwart the creation of a seamless system.

Working together, federal, state, and local governments can develop a plan to address the location of community access points and the technologies used. These model sites, combined with a standard presentation design for information, will help alleviate customer anxieties and concerns, and reduce unnecessary duplication of government efforts. The platform for a virtual government must be determined and implemented uniformly, with input from citizens, all types of customers, and all levels of government.

Meeting Government & Citizen Access Demands

Government must be careful to balance its need to provide services efficiently and effectively with customer needs for privacy and convenience. Government needs to make its services available to customers using appropriate types of technology to assure that customers get everything they need from their government.

Government also needs to ensure that the information provided through these services is accurate while, at the same time, protecting the confidentiality and integrity of the data.

On the other hand, customers focus on getting to the right part of government at the right time and obtaining the right information or services to meet their own needs. Customers need to be able to do this without delay and within a simple set of system procedures. They also need to be able to trust the system's integrity and accuracy, and be confident that their privacy is maintained.

Government must shoulder the responsibility to balance these important needs in designing and maintaining a virtual government. Government needs to include automatic redaction and other security features, uniform client identification, payment acceptance, and anti-fraud measures.

Additional focus must be put on narrowing the gap between the haves and the have-nots to help develop access for all customers. Finally, public access sites must be developed as access points for all Iowans in locations such as public libraries, post offices, county courthouses, grocery stores, city halls, and other familiar and convenient locations.

Roadmap to Universal Citizen Access

Universal citizen access to a virtual government does not mean guaranteed free access from a citizen's home. Sometime in the near future, this may become the goal of government. The immediate future for government is in providing citizens with alternatives to traditional office or courthouse government. It is a step toward creating greater efficiencies, and creating a less costly, more responsive government.

Universal access to a virtual government does mean that government must make sure that there are places, whether in a grocery store or a public library, that a person may go to access government services and information electronically. Universal access also means that the technology used will not be a barrier to people with special needs. Finally, universal access implies that government will not charge people for not having a computer at home.

This does not mean a person couldn't access information via a private Internet

provider, via a home computer, in the same way a person going to a library could access the virtual government. It does mean that computer ownership and wealth are not factors in whether a person can access this virtual government. Government has a responsibility to assure universal access to citizens. These recommendations begin to address the major issues related to virtual government access.

1. **Public Training & Education**
   Governments could unite and develop a comprehensive training initiative for customers about technology and intergovernmental services available using technology. This training package could be available at the public access site, or through an intergovernmental initiative. The educational component to this recommendation should include ways to market the use of public access facilities to obtain government information and services.

2. **Encourage Private Sector Solutions**
   The IITT Task Force supports governmental efforts to work with the private sector in creating private sector solutions that give all Iowans, regardless of where they live in the state, affordable and dependable Internet access.

   In addition, government should look for private partnerships that create mutually beneficial situations. Private business may want to purchase a virtual government terminal to be located on its property -- providing their customers one more service.

This has happened with many grocery stores and the US Postal Service. These stores realized they could capitalize on their customers' desires for a one-stop shop, where they can do their grocery shopping, drop off their dry cleaning, mail their bills, and eventually, obtain a certified copy of their birth certificate.

3. **Encourage Community Solutions**
   Like the above example, communities need to work with government and take the lead in developing solutions to access to a virtual government. Each community is different, and government needs to encourage and develop strategies to reinforce and support community efforts to address their own unique needs.

4. **Collect Access Data**
   Government should collect, disseminate, and share data on how citizens access government. The information collected should help government better understand how citizens access government services and information -- and provide the framework for new service delivery and access systems.

Privacy & Security

The charge of the task force was to propose a plan to develop an intergovernmental technology and information system that is cost effective, efficient, and benefits citizens and all levels of government. As Iowans become more comfortable with and dependent on technology, citizens will expect government to use technology to provide more accessible information and more efficient services.

Through the use of technology, governmental entities have the ability to exchange information, decrease redundancy, and improve services to the citizenry. While this is laudable and hopeful, such an effort cannot be successful if government does not address and citizens do not understand the critical issue of customer privacy.

There are those citizens who believe technology will be of great benefit to them, and these individuals may understand how security features will protect their privacy. However, there are many others who believe that easier access to services will compromise their privacy.

The issue of privacy should not be confused with security. Privacy is the customer's perception that the information provided through technology is confidential, and the personal information solicited is necessary to perform the needed or desired function of the respective governmental entities. Security helps ensure privacy within the technology system.

Security protects the confidentiality of information, addresses the privacy concerns of citizens, and ensures the integrity of the system. Privacy can be protected in an electronic environment. To be successful, government must communicate these protections to build public confidence in a virtual government.

Privacy in an Electronic Environment

As important to ensuring privacy in a technology system is the belief and acceptance by citizens that the information about them made available in the system is truly private, e.g., that only necessary information is available only to those with a "need to know."

The first challenge is defining what is private, or what should be considered private information. This will certainly vary among many individual citizens and government agencies. Strong organizational and individual advocates for privacy will often take the lead in defining not only the citizen's right to privacy, but provide the criteria and voice to ensure it.

The citizen clearly has a role in determining information exchange protocols and procedures as government continues to shift towards a virtual government. Only the citizens impacted by services can make the decision to trade privacy for improved levels of service.

For citizens and government to benefit, citizens must have a clear understanding of the technology system that is being designed. At the same time, they also need a very clear understanding of how government will protect the privacy of

the individual. Without that understanding, it will be difficult for the citizen to make an informed choice or decision about his/her own privacy in the system.

With the exception of a small percentage of citizens, agency staff, and privacy advocates, many citizens do not have an understanding or a great concern about privacy in government information technology systems.

Clearly, it is an issue that must be addressed, and government needs to take the lead to manage the issue. While making the transition to a seamless technology information system may be easier at the government level, it may be more incremental at the citizen or public level where trust and assurances need to be strengthened.

It is important to recognize that the perceptions of the public are vital. Clarifying the perceptions and addressing the concerns of citizens is the key issue for moving information to a technology system. Education and increased awareness, involving government, the private sector, privacy advocates, and citizens will help alleviate the concerns and demonstrate the benefits to citizens.

Like citizens, government agencies are equally concerned about privacy and are bound by laws which require certain information to be kept confidential. Government agencies also need to understand how information will be kept confidential and the privacy of individuals maintained if they are expected to participate in the creation of a virtual government.

Government agencies have struggled for years to define and manage the issue of "confidentiality" as it related to private information and the exchange of that information. Historically, the issue of "confidentiality' or "privacy" has been the major roadblock to intergovernmental cooperation or integration.

While some suggest that these issues became the excuse for not cooperating, there is a true belief by agencies and individuals working in these agencies that they have a legal and moral obligation to protect the privacy of their clients. In addition, many in government are diligent on the issue of privacy and confidentiality because there is a public perception that government is not always careful with the information it keeps on individuals.

As important as ensuring privacy to citizens, is addressing the competing points of view of a number of governmental agencies. There is no standard definition of confidentiality across all levels of government. For a variety of reasons government agencies address confidentiality and privacy differently.

State and federal laws, administrative rules, and the culture and history of the agency and staff clearly determine the approaches and interpretations of these issues. These approaches and interpretations by the agencies and individual staff persons have continued to complicate the privacy and confidentiality issue in government as technology begins to play an increasing role in providing citizen services.

While government agencies deal with privacy and confidentiality issues, the issues are exacerbated as a result of differing standards and protocols, inconsistencies, confusion, and even the potential for misuse of information by government agencies. The current situation suggests that even if privacy was

not an issue for intergovernmental technology use, the development of an information system that gives adequate privacy to citizens and accurate and usable information to government agencies is needed.

In addition to the major issue of privacy and confidentiality, government agencies, as well as the private sector, must address another key issue relating to information exchange. In the current system, agencies exchange information regularly (although technology is not often used to facilitate this exchange).

In that information exchange, there often is little confidence that the information received from the agency is accurate. Often, there are additional concerns that the partner agency may not have a clear understanding of the confidential nature of the information made available.

The concern over misuse of information from one agency to another remains difficult and is critical as government agencies work out their agreements on information exchange through technology.

In order to develop and implement these protocols and procedures intergovernmentally, government entities need to understand the organizational and legal constraints of the respective agencies' privacy issues.

Working together on an intergovernmental and enterprise-wide basis can facilitate the development of rules or regulations that satisfy the concerns of each agency, and certainly ensure privacy for the citizen.

Equally important will be managing the perceptions of the public through explicit communications that demonstrate how privacy is addressed. Changes in public perceptions may take time, but it is a worthy endeavor that will pay off in the end.

Security of Information in an Electronic Environment

According to what the public reads in the paper or sees on television, the world has entered the "information age." With an increasing need for more information at all levels, there is a growing concern about protecting the privacy and integrity of that information as it moves within traditional paper-based systems or within increasingly complex technology systems.

Government has a responsibility to the public to maintain an environment that ensures the secure exchange of information between and among government entities and the public. As government moves toward electronic access to information and electronic transactions, it must address the need to create a secure environment that maintains citizen privacy, that restricts access to information that is confidential, and that protects the integrity of the information exchanged.

The potential for fraud and crime exists with all types of commerce and services. Stolen credit cards, fraudulent use of credit card numbers, social security numbers, birth and death records, and even telephone credit card numbers continue to trouble law enforcement officials.

To the general public, expanding the use of technology as a means for commerce, transactions, and information services suggests an even greater potential for fraud and misuse. The general public has heard of hundreds of instances where "hackers" have perpetrated fraudulent acts via the Internet or transmitted

meddlesome computer viruses that have invaded even the most secure of systems. Realistically, electronic commerce fraud occurs, but the risk is thought to be no larger than with traditional commerce.

At the same time, citizens and government need to understand that there are legal restrictions on sharing certain information. State and federal laws that give protection to citizens must be observed and considered in developing an information technology system. As important, government must work to inform citizens about these laws to ensure a better understanding by citizens and help them alleviate misperceptions about the government's information system.

The challenge, again, is managing the perceptions of the public. Rapid developments in secure transaction technology, certification, and encryption are making real concerns less important. Because electronic commerce and information technology are not clearly understood by general public, extraordinary efforts by government are required to alleviate fears and concerns through education and awareness.

The concerns about citizen and agency privacy can be addressed if security is applied in a consistent, enterprise-wide manner. Security features which protect the confidentiality and integrity of information can form the foundation of any technology information system.

Roadmap to a Secure Environment

It is easy to get caught up in the whirlwind of the "technology movement." With the capacity of technology functions increasing at a rapid pace, the tendency might be for government to adopt technology as the most immediate and cost effective course in providing services. In fact, technology is a means to do that. However, without the valuable input of citizens, many issues of concern may not be sufficiently addressed in this movement toward technology.

Ensuring the right to privacy is a paramount concern to citizens. The security of their personal information is as important. Involving citizens in the process not only provides a "reality check," but makes sure that the information technology system that is developed by government will be appropriate and accepted by the public.

Historically, there have always been concerns about privacy especially with government controlling confidential information. Information technology and telecommunications magnifies the issue by making it easier for government to combine information sources and move information around to other government entities, and even the private sector.

As electronic information and commerce become even more prevalent, the concern for security and privacy becomes more complex. Improved technology and the development of industry standards give government a direction in developing and ensuring security in an electronic environment.

To advance security to benefit the citizens and government, and address the real issues of privacy and confidentiality, the following recommendations are made.

1. **Privacy Advisory Council**
   An intergovernmental Privacy Advisory Council should be established to: examine the privacy act and other relevant laws and regulations; review and adopt recommendations for security

protocols and procedures that protect privacy and address confidentiality concerns; examine disclosure policies; and determine ways to communicate these protections.

The Council should be authorized to adopt recommendations and make policies more consistent and appropriate for use in the intergovernmental technology system. This Council needs to include representatives from local, state, and federal government, the private sector, and a broad range of customers.

2. **Intergovernmental Security Council**
Create an intergovernmental, interagency team involving local, state, and federal government agencies to review current security systems and develop recommendations and policies to ensure that security is maximized throughout the system that includes determining which information can be disclosed and ensuring only

appropriate information is disclosed from a record. The team should also embrace and build upon current industry standards, and work closely with the Privacy Advisory Council.

3. **Public Education & Marketing Plan**
Develop and implement plan for public education to increase the understanding of systems changes in technology information with an emphasis on issues of privacy and security and the rights and responsibilities of citizens and government.

The plan should address confidentiality, how it is maintained within the technology system, how the integrity of data received and input is protected and assured, the development of industry standards currently in place, and the protections built in to protect confidentiality and privacy through security and policy at all levels.

Customer Service & Service Delivery

The challenges government faces now, and will face in the near future, are placing pressures on current structures and processes. Passage of the balanced budget amendment, devolution, and block grants could present a mixed bag of opportunities and limitations on government. At the same time, the public is asking government to do more with less.

The IITT Task Force process researched ways governments can work together and with the private sector to provide better services to its customers. As noted in the access section, the way government provides services to its citizens is as important as the services themselves. The technologies used, the presentation of information, and the places customers go to get services are all issues that must be addressed in crafting a service delivery system that works for both government and citizens.

This section will address the need for government to respond to customer needs in the construction of a virtual government. There are two components that should be examined -- service delivery and customer service.

Service delivery is the way government provides services to its customers. For example, the virtual government may be delivered through computers and Internet terminals in public libraries, or by creating an intergovernmental service desk that is staffed by a person who can access information or provide services seamlessly.

These two delivery options take different approaches, and meet the needs of different customers, but are compatible.

Customer service is the way government helps its customers access government services. For example, the virtual government terminals in public libraries may have a notice that technical assistance is available by contacting the front desk, lifting a help hotline phone next to the computer, or pushing a button on the computer. Customer service implies the need for easy-to-use interfaces, help desks, and training opportunities.

Customer service and service delivery are inextricably linked to the other operational issues of access, privacy, security, standards, return on investment, and quality assurance. None of these issues stands alone, and the approach to intergovernmental initiatives must include an integrated effort that addresses all of these issues.

Government Customers – Who are they?

Access issues have very fundamental implications to government service delivery. To make sure that services are delivered in ways that are convenient and appropriate for the customer, government will need to design a system that addresses the needs and concerns of its customers. At the same time, government needs to create a system that meets its needs for efficiency and effectiveness. Technology can help government balance its own needs with those of its diverse customer base -- citizens, businesses, and other governmental entities.

These customers have different needs and concerns, because the access government for different reasons. Government is designed to meet the needs and address the concerns of its citizens. Citizens are a primary customer of government -- they interact with government to obtain information, to receive documents, to pay taxes, and to receive services.

Businesses are also considered a primary customer, but unlike the citizen, their needs may be more complex. Finally, government itself is also a primary customer. Agencies from all levels of government, as well as from other states, exchange information and provide services to each other regularly. The needs of government agencies are very diverse.

The diverse needs of these customers creates a dilemma in developing and delivering services. The needs of these customers -- businesses, citizens, and government -- are fundamentally different. If government is expected to meet the needs of all customers, separate services and delivery systems may need to be considered. However, duplicate service delivery systems defeat the purpose of intergovernmental planning.

Because many individuals will not want to give up their traditional ways of working with government, it is more appropriate to discuss a continuum of service delivery systems. Perhaps a virtual government is one option, and traditional delivery systems are another. The customer is then given a choice.

In addition, customer services can be expanded and targeted to help new electronic service delivery systems meet the needs of a broader range of customers. Therefore, customer services combined with a continuum of service

options can create a single system that addresses the needs of all government customers.

Identifying Needed Services & Delivery Methods

Technology and telecommunications can deliver services to customers more efficiently and effectively than in the past. Government services delivered through technology need to be customer driven and government needs to be responsive to customer needs and concerns when using technology to deliver services intergovernmentally.

While there is an overall willingness among all levels of government to work with each other to provide better services and make information more accessible to all Iowans, technology must be incorporated in a planful and practical way to develop and deliver the services most needed and most useful.

Customers could be helpful to government in identifying the kinds of services -- the types of information, assistance, and transactions -- that they would use most often. Customers could also assist in determining the best and most efficient mechanism and format for receiving the service. Understanding customer needs will help governments respond appropriately in the development and implementation of a virtual government.

Customers will have varying levels of capacity to use technology. They will also have different levels of interest and willingness to access services through telecommunications or technology delivery systems. Government must recognize this diversity and ensure that government will support several avenues for accessing government programs,

information, and services even in the information age.

Providing customers with a choice between the convenience of a virtual government and the comfort of traditional service delivery will quell many anxieties and provide non-confrontational opportunities for customers to become accustomed to technology. In service delivery, the customer should set the pace in moving toward a virtual government. Customer services need to support these choices.

In addition, to expand capacity of customers and encourage increased use of technology-delivered services, government will want to provide a range of on-site supports for users. These could range from a help hotline phone at a terminal with a real person available to answer questions, to a person located on-site, or an on-line video connection to help people use the system. All supports should be available at no cost and in a user-friendly format.

In addition to customers' reluctance about using "intimidating" and sometimes complex technology, government must also deliver the services to those with special needs.

Consideration should be given to accessibility of the terminal or site; ease of use of the equipment for those with physical disabilities, arthritis, or other motion/strength limitations; options to assist people with visual impairment; options to assist people with hearing impairment; options to assist non-readers; and providing instructions and support in other languages. All of these are critical to the perception of equal access to the services and will impact both customer service and service delivery.

The decisions on what services will be offered and how they will be delivered is closely related to other operational issues, particularly access, privacy, and security. These issues should be considered together in planning and implementing the seamless system.

Education & Awareness

As in most new efforts, an initial focus on education and awareness is important to the customer service and service delivery issues. Customers cannot use services offered via technology unless they know about them, and understand the advantages. It is not enough to simply notify the public that an electronic service is now available. Customers need to know that it is available, and they need to understand how this new choice in service will benefit them.

Government customers must also understand the new service delivery system and understand how and why the technology option provides better results for them and for government. All customers should be made aware of the complexity of the seamless system and of the safeguards in place to ensure they receive the services they need without compromising privacy and security of the information.

Education and awareness can be integrated into other communications and services provided by government to ease customers into a virtual government. In addition to libraries, the K-12 schools are also natural sources for awareness efforts and have potential of reaching not only the students (customers of the future) but their families and other current customers.

Training

Training can make or break customer service and service delivery. Without training of customers, customer service and satisfaction will likely be lower than without appropriate training. Customers that lack appropriate training most likely will bypass the virtual government in favor of traditional services.

Training increases the efficiency of the customer using the system, and technology increases the efficiency of the government delivering the services. Government needs to encourage customer feedback and input, so that training opportunities meet customer needs and address customer concerns.

People learn differently. Training should be made available in a variety of formats (self-guided, person-to-person, video, textbooks) to enable citizens to easily interface with government. Training can be offered on site and on demand, or at other times and locations.

Again, the K-12 schools and libraries can be considered partners in developing and delivering training about using technology in our daily lives, as well as providing specific information about receiving government services through a seamless technology system.

Training government personnel to use technology in delivering services and providing customer service is equally important. Not only do they need to be able to easily access and use the services, they also may need to be able to perform other functions using retrieved information and then provide the results to citizens or others for additional uses.

In many regards it is easier to provide training to government customers because of their roles in ongoing use of the system and need for the enhances services it can provide.

Managing Change

Change is never easy. People generally do not seek change or make change willingly. It is human nature to continue doing things in ways that are familiar. Transition to a virtual government represents a big change for many government workers and customers. There will be natural resistance to this change by a significant number of people. Nevertheless, there should be the expectation that people embrace change to a seamless system because of the greater benefits they will receive.

Encouraging the shift to a virtual government that is delivered and accessed by technology is made more difficult because many people have an underlying fear of technology. Customers unfamiliar with computer technology may be uncomfortable and feel powerless to operate the system, let alone use it in ways that will be beneficial.

Government workers who may not understand new procedures or operational policies may become concerned about accuracy and integrity of the information they are processing. Technology is new and mysterious, and perceived as wielding power over customers. Education and training can help customers realize that they are the ones who are now wielding the power over information and services that were not available before.

Overcoming technophobia and resistance to change is an incremental, educational process that can be addressed in customer service and in the design of the

virtual government. The best way to overcome the concerns and fears of customers, and meet the need of government, is to create opportunities for positive experiences with technology. Technology that is user-friendly, and information that is presented in simple formats, can help citizens, business people, and government personnel overcome their fears and embrace change.

Another concern of customers is the loss of the personal contact with a government worker. For example, Iowans can register their vehicles and obtain a drivers license renewal through the mail. They no longer need to wait in line, during normal business hours, to perform these activities. However, there continue to be people who, for whatever reason, continue to go to the appropriate county and state offices instead of choosing the mail-in option.

Losing this personal contact is a threat to many people. They may feel that government is trying to become more remote, rather than becoming more accessible. If technology provides benefits and adds value to the lives of customers, they will eventually migrate toward that form of service delivery. This process will be slow, and again, it is the customer that must set the pace.

It will be important to introduce changes in services in small steps, and to keep the familiar and personal options available for those who choose them. The benefits of using technology will need to be stressed to encourage more people to choose and use the new service delivery system.

These benefits include greater efficiency, reduced cost to customers, information and services available 24 hours a day, services available from a variety of convenient locations including one's own home, and more current and accurate information available via technology.

The new system should also make change easy. User-friendly, simple configurations of instructions and procedures to obtain services will help stimulate customers to use new services. These issues are important to both citizen and government customers as they seek to accomplish more in a more efficient manner.

Providing services in convenient places -- public libraries, at home -- can also foster acceptance of change. A virtual government will entice many to learn more about technology, and positive experiences by customers will cut a path toward more wide spread use.

Trust in Technology

While many customers view use of technology to create a virtual government as increasing the value, accuracy, and reliability of government, others feel quite the opposite. Some people might mistrust technology itself, and thus mistrust the services or even the government agency delivering the services. Part of this issue is related to fear of technology, but much is connected with lack of understanding of the complex system that delivers the services.

Technology is daunting to many, if not most, of us. We don't understand how it works. We know it is very complex and often we don't even want to try to understand technology. This makes trusting technology difficult for some.

Customers may think they will break something because they are unfamiliar with how technology works. Likewise, some customers will assume that the information contained in the system will be unreliable because so many things can go wrong with technology, and that

errors will be difficult to disprove. Although ATMs are prevalent in society, it is not hard to find someone that continues to distrust the technology, and falls back to traditional service choices -- making all transactions in person, at the bank.

Government must address these very real perception issues by including explanations and assurances in customer education, awareness, and training efforts. Government must also recognize that some technology systems of the past have in fact been unreliable, and customers did not trust them for a reason.

The virtual government conceived by the IITT Task Force will pull together government and private sector partners to ensure that this very complex system is reliable and convenient for the customer.

The risk of increased fraud must also be addressed. Depending on their perspective and experience in using technology, customers will feel differently about the potential for electronic fraud in a virtual government environment.

Some people think that technology is an invitation to hackers and other perpetrators of fraud. Others disagree. Government will need to take necessary steps to reduce fraud and other criminal activities. To build trust, government will need to clearly communicate these steps to all customers.

Another issue relating to trust is found at the government level. Sometimes agencies or levels of government do not trust the information that comes to them from other agencies or levels of government. This is typically not a systems issue, but an issue of trust in the quality of information. As intergovernmental information sharing is expanded to create a seamless system of services, these kinds of trust issues will also need to be addressed and solved.

Opportunities for Customer Service & Service Delivery Innovations

The creation of a virtual government service delivery system unveils a wide range of opportunities for new and enhanced services to customers. A seamless system will allow customers to interact with any level of government in a simpler and more efficient manner.

Technology can help customers receive services more quickly. Government can become more efficient in delivering services, and customers will become more efficient in their own work as a result. An integrated electronic services system will also provide more consistent and accurate information, assistance, and services to citizens and businesses and government customers.

Currently, cost creates a barrier for some customers. Many individuals do not have a personal computer and modem, and therefore cannot access the virtual government from their homes. Customer service and service delivery designs and plans must address this issue by providing choices and making the virtual government system available in publicly accessible sites.

Opportunities for creative service delivery methods will be greatly expanded in a seamless system. Certainly, current methods will continue to be used -- such as phone, fax, ATM, Internet. Expanded options will include these as well as interactive video terminals, simulated environments, and many others.

Services could be made available through public libraries or other public locations, schools and universities, partnerships with the private sector, and other practical access points to ensure that all customers can receive services of the seamless system if they choose.

The private sector may be willing to collaborate with government to provide better services to citizens and businesses. They may even have some resources available to assist in developing services. Government must take advantage of private sector collaboration opportunities by developing the seamless system with input and participation of the private sector.

Service delivery on the seamless system will provide special populations with services in ways that allow them to participate more fully in their community. People with disabilities, the elderly, non-English speakers, and others will find they have first-time access to services that have been available to the general population in the past. In addition, new services will make interaction with government much easier for these groups of customers.

The opportunities of customer service and service delivery are limited only by government's commitment and resources to focus in these areas. For the future, customers' expectations of the system will grow and they will demand services in more and diverse formats and settings. Government will have the opportunity to respond to these needs by using technology as a means to provide better government access to all customers.

It is vital that government step up to this challenge. Disincentives to interagency and intergovernmental collaboration must be removed on an enterprise-wide, if not intergovernmental, level.

While customer choice is imperative in building acceptance for a virtual government, choice is not an option for governmental entities. Government needs to be very forthright in its charge to reshape and integrate its service delivery systems to provide customer-centered services. Technology can make this happen.

Government agencies should be expected to work together to develop solutions to service delivery problems, and disincentives to innovations need to be removed. Through empowerment of government agencies, innovation and collaboration can flourish.

Impact on People

It is important that this system of technology-based services never lose sight of the individual customer it is designed to serve. The system will be used by individuals, and people will both affect and be affected by the seamless system. Many of the issues described earlier in this section will contribute to the impact on people.

At the most basic level, citizens and businesses should have simpler interaction with government. By using technology, users save time that was spent traveling, waiting in lines, and appearing in person. Government will be streamlined for people using the system. As a result of the ease of use and access for customers, greater trust of government by citizens and businesses could develop.

On the other hand, some citizens and businesses may perceive that they have been depersonalized and alienated by technology in government. Some may think that expanded use of technology increases risks of abuse of information and increased fraud in electronic transactions.

They will worry about loss of privacy and be more reluctant to use the system. In some types of services, human interaction will be reduced, so government will need to ensure that real people are available for services that require personal contact.

Government employees will also be impacted by the seamless system. This may cause anxiety through changed expectations and roles of employees. Some may not be qualified to perform at the higher level. Government will need to take steps to prepare employees to take advantage of the seamless system to diversify and deliver improved quality services to citizen and business customers. Through using technology, employees will better use resources and have time to be more proactive in their approach to work.

Employee use of the system will require ongoing training and support by government. Because of the increased training and specialization of employees and the rapid changes that occur in technology, employees will become increasingly skilled and valuable to government and to customers. Duplication of tasks across and between levels of government will be reduced, making employee functions easier to perform efficiently and effectively.

Levels of customer service and service delivery will be different for those using the seamless system and for those who choose not to use technology. Government will need to be sure that all people receive services, regardless of their choice of delivery method.

Impact on Government

The challenges posed in using technology to create a seamless, virtual government have a significant impact on governments of all levels. Government will be expected to provide additional, not fewer, services in the short-term in order to give citizens choices.

Government will need to be responsive and proactive in service delivery. Government will be faced with finding ways to meet very diverse needs in a single, integrated system. Citizens and businesses often need services that are much different that those of government customers. They also need the services to be delivered in different ways. Government is challenged to balance the needs of all customers in delivering accurate and timely services.

After witnessing the convenience of technologies that create a seamless government, customers will begin to demand that government offer more services and information in this manner. The work for government and the impact on development and support of services and personnel will never be finished.

The creation of a virtual government, and using technologies to assist in delivering services, also has implications on government infrastructure. If access will be obtained by customers dialing into a government Intranet (an enterprise-wide, internal computer network), security measures and appropriate firewalls will need to be developed to make sure that unauthorized individuals are not hacking their way through information that is confidential, or destroying vital records.

Decentralized access to government services and information could also profoundly impact libraries, courthouses, and other government offices. The physical structures that house government operations may not be needed in the future if customers can receive services and information directly in their homes.

The need for 99 courthouses, regional state government offices, federal field offices, and community libraries may be questioned if services continue to be decentralized and use of a virtual government system is embraced.

On the other hand, decentralized access to government could have the opposite effect in the near future, placing physical, fiscal, and personnel demands on community access sites like libraries and courthouses.

Libraries, for example, may not have staff trained in using technology or available to help customers. They may not have the financial resources necessary to hire a full-time resource person to provide technical assistance, and purchase the connections and equipment needed. Many libraries are already facing difficulties in finding more space for their holdings -- and anticipate this problem to grow. Community access terminals would require space, and time limits may need to be imposed if space is not allocated for multiple terminals.

Government must be prepared to devote the required resources to developing, maintaining, and expanding its services and delivery system to customers. In addition to state funds, government should be active in developing mutually beneficial relationships with the private sector to support and provide for ongoing system needs.

Roadmap to Service Innovations

The creation of a virtual government has a profound impact on the structures government employs to deliver services, and the support it provides customers that receive those services. It is evident in this review that government needs to work closely, through an intergovernmental process, to design a system that is user-friendly, secure, accessible, free, and convenient.

Careful attention to service delivery and customer service will heavily impact the use, efficiency, effectiveness, and value of using technology to deliver intergovernmental services to the people of Iowa.

Likewise, governments need to be empowered to work together, and disincentives to intergovernmental and interagency cooperation and innovation need to be removed. Governments and customers alike need to see some immediate successes in recreating a service delivery system, and need to be prepared to take risks.

The operational issues of customer service and service delivery are closely tied with the other operational issues. These recommendations should be integrated in a comprehensive strategy to address all of the operational issues identified.

1. **Customer Education & Awareness Program**
   Develop a comprehensive education and awareness program for all customers -- citizens and business, and government customers -- to help them feel comfortable with and trust government services delivered using technology.

   In addition, government should take the lead to develop ongoing training and support for all customer groups to ensure correct and expanded use of the seamless system of service delivery. A marketing plan should accompany this program, so that customers become aware of the opportunities offered.

2. **Citizen Involvement in Planning**
Include citizens, business, and government customers in a process to identify and develop appropriate services needed by customers, as well as in identifying and developing creative delivery methods that ensure equal access to government services by all customer groups and special populations.

3. **Encourage Innovation & Collaboration**
Government needs to develop and expand opportunities for collaboration with the private sector in mutually beneficial areas of customer service and service delivery. At the same time, government policy makers and enterprise leaders need to remove disincentives to cooperation and empower agencies, enterprises, and levels of government to increase accountability and encourage intergovernmental opportunities.

4. **Conduct an Assessment of Customer Access Trends**
Government needs to cooperatively assess how and when citizens access services, and determine how they want to access services in the future. Based on these findings, government needs to develop a comprehensive, intergovernmental plan to meet the needs of customers.

4. **Provide Customers with Choices**
Customers need to set the pace for change. Government can not and should not force customers to use a virtual government if they are not ready to use such a system. Government should give customers choices in how they obtain services and information -- through a virtual government or by going to the appropriate offices.

INTEROPERABILITY

While it may sound cliche, the information superhighway has become the onramp to the future. Whether researching a topic on the Internet or depositing a paycheck at an ATM, electronic commerce is transforming the way people interact with each other.

This new technology revolution has serious implications to government, as policy makers search for ways to provide more efficient and convenient services to its citizens. Virtual government can transform the way citizens receive and send information -- but only if the infrastructure is in place to support the applications.

Like the nation's interstate system, the telecommunications infrastructure must fit together to allow its users to get from one place to the next without complications. Unlike the days of the Apple-IBM wars, systems are now interoperable and able to support the public need for global connectivity.

To assure interconnectivity, the private sector has developed a set of standard protocols for communicating. These industry "standards" allow many things to happen -- they allow individuals to exchange information on the Internet as well as facilitate the flow of monetary exchanges over fiber optic networks.

Unfortunately, standards can dictate a protocol for communicating and, in some cases, may even dictate the type of software that must be used in these exchanges. Thus, "standardization" often carries negative connotations, particularly in the public sector, where confidentiality and security needs vary from department to department.

Certainly, the biggest challenge government faces is developing a set of "standards" that balances the need for flexibility with the need for interoperability. This challenge is significant at a single level of government -- and a monumental challenge on an intergovernmental level.

For this reason, this section will not discuss "standardization" in its traditional sense. If that were the case, this section would suggest that a team develop a set of standards and that federal, state, and local governments mandate those standards across departmental lines. Instead, this section challenges computer experts in government to assess current information management systems and technology resources and develop an interface that allows these proprietary systems to become interoperable.

Making It Work -- Interoperability vs. Standards

Total standardization of information technology is not a viable or realistic option for government. Proprietary systems, the varying needs for security and confidentiality, and budget dynamics make standardization a difficult task. The adoption of intergovernmental standards is even more unlikely.

However, government needs to develop a set of parameters which give individual agencies the flexibility they need while simultaneously ensuring that they are interoperable with each other. This approach focuses on the interface between proprietary systems, not on the systems themselves. It also focuses on

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linking information -- regardless of how that information is stored -- into a virtual database of government information. The presentation of information -- not the information itself -- becomes the focal point.

The ability of proprietary systems to operate with other proprietary systems is called *interoperability*. Unlike standardization, the internal aspects of systems are not the concern -- it is how and what these systems communicate that is important.

This is a key distinction. Interoperability requires that systems be compatible -- standardization mandates a type of system. Unlike the older standards approach, interoperability assures that each entity will be able to communicate with each other without sacrificing their own specific technology needs.

This is the practical choice for government and an essential component of intergovernmental service delivery and electronic commerce. Without the ability to pull information together and create useable linkages between departments, the goal of a seamless government is out of reach.

Implications to Intergovernmental Cooperation & Seamless Government

Intergovernmental cooperation in technology is predicated on interoperability between levels of government, within a level of government, and with the private sector. Without the assurance of interoperability, the citizen will not be able to recognize the benefits of the virtual (seamless and electronic) government.

Creating a "virtual government" that blurs the boundaries between federal-state-local government is a goal that can only be achieved if interoperability is addressed. There are many types of government transactions that could be conducted through electronic means. By making electronic commerce secure, simpler, more efficient, and less costly citizens, businesses and governmental entities can benefit.

These electronic commerce benefits could include improved customer service, quicker turnaround time, reduced costs, elimination of errors, and reduction of paper documents and printed publications. For government, businesses, and citizens to benefit from potential applications for electronic commerce, interoperability must be assured.

Interoperability Issues

While this section may make interoperability look like a simple concept, it is not. Computer experts within government will be challenged to create linkages that do not currently exist, based on the ways departments capture, store, and retrieve information.

Interoperability is vital for government and citizens to communicate and interact effectively, efficiently, and with security. Interoperability needs to be applied in order to:

➢ improve efficiency within a level of government

➢ link with other levels of government

➢ create a virtual database -- a seamless presentation of government -- for the citizen

Infrastructure

To accomplish these three goals, there are three levels of interoperability that need to be addressed -- infrastructure, processes, and delivery.

The demand for an interconnected world is driving the technology industry to be responsive to the need for interoperability. And the market is responding rapidly. Government needs to do the same -- by assuring that its systems can communicate effectively -- and that interoperability be addressed in a way that assures accessibility to information and communications.

Hardware can be manipulated in many ways to assure interoperability. Government technology professionals will need to determine what types of systems exist, how they communicate, and how they can be linked to a government-wide infrastructure.

Because many departments are already linked to a government-wide Intranet, interoperability may already be assured. However, this must also be assured on an intergovernmental level.

Government Processes

Departments use technology to meet a number of needs and perform a variety of functions. These applications and programs are often written to meet the specific needs of a department or agency.

Likewise, data is stored in many different ways, depending on the needs of each department. There are no common database fields or descriptors used across departmental or governmental lines. Interoperability will need to allow information to be exchanged even though that information may be stored in different ways.

Government processes -- the ways technology is used to deliver services, communicate with others, and store data -- must be streamlined to increase government efficiency and performance. These processes must also be evaluated and adjusted to ensure interoperability.

Interoperability may require that some government processes become automated. It is important that, when looking at streamlining government processes and making them interoperable, that time is also taken to review departmental practices and procedures prior to automation to ensure efficiencies.

Government should automate processes -- but not necessarily automate the current practice. Interoperability will need to address efficiencies, so that it does not create duplication of processes. Current practices should be examined, streamlined, and improved first, and only then automated.

In order to assure interoperability, government information technology experts will need to assess what information is stored in each department, and how it is stored. This assessment can assure interoperability in one of two ways -- it may be used to link common fields together to create a "virtual database" for the citizen to access or it may be used to determine enterprise standards for data storage.

The creation of a virtual database is the practical alternative when planning for intergovernmental applications. It does not require departments to overhaul their information management systems, retrain staff, and purchase unnecessary equipment. A virtual database concentrates efforts on connecting common information across government and department lines. This enables the

user -- a government employee or a citizen -- to obtain information captured from several departments and governmental levels without going separately to each of those sources. A virtual database provides the structural base for the one-stop virtual government.

Each level of government should determine that it is in their own best interests to establish enterprise data standards -- but this is impossible on an intergovernmental level. Some semblance of a virtual database will be necessary in order for the citizen to have easy access to intergovernmental information.

Efficiency may drive government toward the development of an enterprise-wide data standard. Currently, agencies collect duplicative information, compile, and present it in many different ways. These agencies may require different security features. There is currently no consolidated index of the information each agency collects, and there is no uniformity in government information collection and dissemination.

Standard data fields do not preclude agencies from developing additional fields that are specific to their needs. These "standard" fields would only address common information (e.g. name, address, phone, social security number). Standard fields, combined with linkages which enable a virtual database, can help reduce duplication and encourage government efficiency in storing and collecting information. Both the government employee and the citizen providing the information benefit from this efficiency.

Delivery

To the citizen, technology is a tool that allows access to a virtual (seamless) government. To government, technology is a tool that allows government information to be consolidated into a virtual database. These tools allow electronic commerce and information exchanges to occur.

Whether it be a virtual front counter or some other single point of entry into government, common or linked data fields will enable a government worker to determine eligibility for a number of programs or complete a number of transactions, regardless of the department or level of government responsible for that service.

Intergovernmental service delivery will create additional interoperability demands. When assuring interoperability, the following must be addressed:

- Authentication procedures *(customer identification, anti-fraud measures, validity of information provided)*

- Automatic redaction *(the process which allows government to set levels of access and extract publicly accessible portions of a record, while maintaining the confidentiality of the non-public portions)*

- Electronic Commerce Security *(payment issues, validity of exchanges)*

- Other areas that need to be interoperable include: e-mail; Intranet access; and government processes.

Roadmap to An Interoperable Government

Government's traditional structures make interoperability a challenge and a worthwhile endeavor. Interoperable governmental systems will allow agencies and levels of government to work together toward the same goal -- providing a seamless government to the citizen.

Technology will become the barrier to cooperation if interoperability is not addressed. Managing the challenges of interoperability requires an ongoing, concerted effort.

The following is a recommendation -- or a roadmap -- to help Iowa manage the issue of interoperability.

1. **Conduct an Enterprise Information Inventory**

   There are two parts to this study. The first deals with the need to inventory all information collected by various agencies, organizations, and departments, and determine how best to collect, assemble, maintain, and provide access to that information. Secondly, there is a need to assess and review each level of government's operating environments, review organizational structures of each agency and determine how they function and interact with other agencies, assess their technology resources and needs, and identify other organizations that need interconnectivity.

   In addition, government needs to understand the standards or protocols being used (or in the development stages). This can not happen on an enterprise-wide basis, but can happen department-to-department and be consolidated into an enterprise assessment. The product of this study should be a schematic of what technologies are used, how data is stored/used/updates, what other entities need to access, and the level of interaction needed.

2. **Compile a Directory of In-House Information Expertise**

   Internal expertise is spread throughout government -- but there is no listing of these resources. Departments may need to call upon each other at various times to make sure that systems are interoperable. This listing could be extremely useful in those instances.

3. **Establish an Intergovernmental Interoperability Committee**

   Governments should cooperatively participate in a permanent interoperability committee that includes representatives of the private sector, private telecommunications providers, federal government, state government, local government, and the public in developing interoperability policies.

   Individuals participating on this committee should represent individuals who are front-line customer service staff, technical experts, program directors, and agency heads. This multi-level policy board should be very inclusive and structured to ensure maximum participation from affected entities.

4. **Make Recommendations for Interoperability**

   Based on the assessments and the future direction of government, the interoperability committee should make recommendations on the level of interoperability. This may involve the adoption of some standards and should suggest a mechanism to

periodically review emerging trends that place demands on existing systems.

The committee also needs to make a recommendation on working with the Federal and local governments. This recommendation will determine how and if intergovernmental cooperation will occur successfully.

Private sector involvement is the key to assuring that interoperability parameters are compatible with and driven by the market. This allows government to communicate effectively and efficiently with its citizens, businesses, and other levels of government.

It is important for government to adopt and embrace the industry standards when migrating into the emerging electronic commerce technologies. These standards must coordinate and integrate the existing and emerging technologies using the broad protocols of communications, compatibility, and security. These technical and operational standards must not be overly prescriptive as to trap government and private sector participants into an arrangement where they are dictated to use one path of technology.

5. **Communicate Interoperability**
The interoperability committee needs to develop and implement a communication plan that identifies who communicates the need for interoperability and how the needs are communicated. Good information and a good communication plan are the key to assuring interoperability. Departments need to know why it is important, how easy it is to assure interoperability, how it helps them meet their mission and become more efficient, and how the integrity of their data will be maintained.

One way to encourage this communication is to establish a clearinghouse of interoperability information – directions for agencies in developing department policies in information management.

6. **Create a Process for Reviewing Interoperability Needs & Demands**
Technology changes rapidly and places new demands of government and citizens. The process of reviewing and revising interoperability parameters needs to be ongoing to address changes in the industry, information management systems government processes, and operational dynamics. The private sector and all levels of government need to be involved in this process.

RETURN ON INVESTMENT & QUALITY ASSURANCE

The issues of **Return On Investment** and **Quality Assurance** are closely related. Return on investment means that technology plans and technology projects accomplish what was intended of them and return maximum positive benefits to Iowa and its citizens. Quality assurance means that plans and projects are implemented in the most effective manner possible. This section speaks specifically to the implementation of technology projects in government -- not just the models presented in this report.

Intergovernmental planning efforts must be sustained to be effective. Without intergovernmental participation during the implementation phase, technology projects may not provide the expected result. Return on investment for technology projects will, no doubt, be measured in the following ways:

➢ More effective government.

➢ More innovative, responsive and agile government.

➢ More open government, with much improved access by citizens to government officials and information.

➢ More flexible government, i.e. one that provides services and information anytime, anyplace.

➢ More "seamless" government (i.e. a situation in which boundaries between levels of government and agencies are less noticeable to customers).

Intergovernmental technology models -- and other government technology initiatives -- need to be implemented with high standards for quality. Some essential ingredients for assuring high quality outcomes include the following.

Clearly Defined Project Leadership

Having clear channels of leadership is important for the successful completion of projects, especially those which require the cooperation of multiple organizations. Leadership should be identified as soon as possible for each of the projects selected by the Task Force for implementation. Both a lead organization and a lead project manager should be selected, with project teams including individuals that cross agency and government lines. The major participants in the project should all be in agreement on the leaders and then provide support.

Goals, Benchmarks, & Feedback

Quantitative goals, benchmarks, and timetables should be set for all of the projects chosen by the Task Force as soon as possible after the publication of this report. The existence of quantified goals (objectives), benchmarks (measures of progress toward those goals), and timetables will provide critical feedback throughout the process of implementation. Progress toward implementation will be able to be assessed and corrective action taken more quickly.

The projects suggested by the IITT Task Force do address the issue of customer feedback and benchmarks -- but the implementation plans for these projects

(and others) must include a plan for the periodical assessment of progress. This assessment should reflect customer concerns and suggestions, as well as the progress toward goals.

Sound Project Management

Almost all of the projects chosen by the Task Force are complex and involve a number of tasks or steps and a variety of resources to implement. Some projects are dependent upon the success of other projects. Others are inter-related in less direct ways. The use of sound project management techniques is critical to success and timely implementation in such a situation.

Project managers need to interact on a regular basis to ensure consistency and eliminate duplication of effort. This communication will help direct the enterprise goals of government and integrate agency goals to a greater extent.

For instance, if two projects require a technical consultant to be hired to design a software package, it may be more efficient and cost-effective to do it under the same contract. In addition, projects need to be integrated at a high degree. This will place a high demand on the project managers, who will need to focus efforts on communication, cooperation, collaboration, and ultimately integration.

In addition, projects recommended by the Task Force are not accompanied with a complete business plan. Project managers will need to fully develop a business plan that demonstrates shifts in resources, funding, and other assets.

Decisiveness

Since most of the projects selected by the Task Force for follow-up are complex, they will require that many decisions be made. Keeping them on track will require timely decision-making. Decisions that need to be made should be identified, outlined, and then made as soon as possible to prevent unnecessary delays.

Government traditionally has a hierarchy which must be followed for decision-making. Each department will need to ascertain how these decisions should be made, and who will make them. This needs to be determined, and an emphasis must be placed on the input of the project leads and on the timeliness of decisions, if this effort is to be successful. Decisiveness by project teams and managers will help lead to better returns on investment and higher quality results.

Flexibility and Opportunism

In some cases, projects may not evolve exactly as planned. Unforeseen difficulties or opportunities may arise. For instance, a new technology may be introduced that changes the project concept in a fundamental way or a new partner or funding source may be revealed. Planning and project management should not be so rigid as to deal with unforeseen difficulties or take advantage of unforeseen opportunities. It is important that government decision-making structures reflect this need.

Customer Involvement

Involving customers in a meaningful way is the key to successful projects. Without customer involvement, projects are not likely to happen as intended. It is important to include the ultimate customers of projects in all phases of their

planning -- the earlier in the process, the better. This will ensure that customers are getting what they want and need from the projects. Customer involvement can be accomplished in a number of ways, including membership on the project team, advisory committees, surveys, and focus groups.

In addition to customer involvement in planning and implementation, it is also beneficial to have a system of checks and balances. Customer input periodically throughout the project can help direct efforts. For instance, a focus group of users could help government ascertain whether the project is accomplishing its goals, whether citizens are comfortable using the technology, and whether there are things government can do better. Recognizing customer concerns and making changes that reflect customer suggestions can help government agencies accomplish their goals and reduce future headaches. However, evaluation should be continual. As government moves to outcome-based processes, recognition of customer input and system efficiencies will become tantamount to the agency.

Private Sector Involvement

A number of the projects will require the involvement of the private sector (e.g. potential customers, telecommunications companies, vendors, and other contractors) to be accomplished. Early and active involvement by key private sector stakeholders should be sought.

The IITT process involved the private sector at the work group level -- but not on the Task Force level. Private sector involvement in future planning efforts is important to ensure government plans are integrated and in sync with private sector trends. However, private sector

participants need to be carefully selected, so that individuals with proprietary concerns do not guide decisions.

Team Empowerment

Upper management must fully empower the teams responsible for implementing the projects selected by the Task Force (and other technology projects) to get them accomplished. Teams must have both the authority and the accountability for accomplishing the projects. One good way to think about the collection of intergovernmental teams implementing these projects is as a "skunk works," a semi-autonomous group that is able to get high quality, innovative results quickly.

Empowerment also gives ownership and begins the process of rethinking government. A seamless government implies the need for cross-over on a number of levels. This empowerment will help manage change by involving more individuals at all levels of government in project implementation.

Effective Communications

Most of the projects recommended by the Task Force for implementation require the interoperation of several information systems or organizations to be successful. All will no doubt be team projects of some sort. This sort of situation places a premium on effective communications among team members, managers, customers, vendors, and other key players.

Communications will help on a number of levels. Communicating with the citizen about the benefits of a project will help begin the process of educating Iowans to the possibilities of technology and telecommunications. At the same time, interagency communication will begin the process of bridging projects and

programs. As agencies fulfill their missions, they may not see the types of projects other agencies are pursuing. These projects could have applicability beyond their current functions and could be expanded to help another agency (or level of government) fulfill their missions.

Early Resolution of Differences

Some projects that cross over organizational lines or that involve the interconnection of information systems may lead to differences of opinions over standards, security measures, or other matters. It is important that such differences of opinion are resolved as quickly as possible so that implementation can move forward.

Differences over standards and other matters should be resolved pro-actively. Key individuals from the participating organizations should be involved in the development of standards and other matters that govern interoperability or security of systems.

Working Together to Create a New Vision

In planning for Iowa's technological future, it is imperative that a cooperative effort by local, state, and federal agencies be pursued, while also optimizing private sector participation. Agencies at all levels must make a concerted effort to share information, resources, and capacities for successful planning and implementation of technology projects.

Intergovernmental planning efforts become increasingly important as resources continue to diminish and computer networking grows. By sharing resources, agencies can minimize duplicative efforts and increase efficiency, thereby ultimately benefitting Iowa citizens. Intergovernmental cooperation in monitoring and implementing technology projects can also ensure system interoperability, while also addressing standards, security, and confidentiality issues in a consistent manner.

While intergovernmental cooperation is essential to the planning process, input from the private sector is equally important. Private sector participation can provide a unique perspective that will add value to project implementation and increase government efficiency to provide the optimum benefit to citizens.

The Need for an Intergovernmental Approach

To create and implement an Iowa technology plan that will truly benefit all levels of government, the private sector, and citizens, intergovernmental cooperation must be achieved and sustained. Although previous and current government projects have required some agencies to collaborate and share some of their resources, intergovernmental cooperation among all agencies and all levels of government is imperative to implementing technology projects.

State and local governments are increasingly required to administer more projects with fewer dollars. Diminishing resources will continue to increase as the block granting of federal funds continues to the state and local government levels. Cooperative planning can help government agencies and departments at all levels meet this challenge.

One means of addressing this challenge is for agencies and departments to share their resources, costs, expertise, and information. Typically, individual agencies alone do not have the fiscal ability or the personnel or technology resources that are required for implementing technology projects.

Local governments are often more profoundly affected by limiting mandates, rules, and regulations than federal or state agencies and, therefore, find it more difficult to leverage the necessary resources and expertise needed to reach technology goals. By pooling resources, local, state, and federal governments will have an enhanced ability to develop and utilize technology in ways that will directly benefit Iowans. Through coordination, duplication is reduced and the resources are used with greater consideration.

It is recognized that each agency neither needs nor can afford its own group of

technology experts to address coordinate technology applications or address equipment problems within the agency. Sharing a common group of experts minimizes costs to all. In addition to sharing resources, agencies and departments can also collaborate on technology training. Joint training can reduce costs each agency and department would be required to spend if they trained employees only within their agency or department.

Intergovernmental cooperation is also critical to ensuring data are maintained by each agency and department in a consistent manner. Without this consistency, it can be difficult to share information. Inefficiency and duplication in information management can be resolved by establishing enterprise-wide data standards. These standards need to be communicated throughout government and the private sector, so that others may create the necessary interfaces.

For intergovernmental cooperation to occur, all departments, agencies, and levels of government must maintain open communications within and among each other. To encourage and achieve this communication, department heads as well as employees must make a commitment to sharing data, information, and resources.

Intergovernmental cooperation can also foster innovations in service delivery. Program integration and simplification, two objectives of this process, can create a more efficient and approachable government. Consistency throughout government can begin the process of simplification, and lead to innovations that directly impact Iowa citizens.

Government processes may also be the target of innovation, as technology

simplifies interactions and saves time by reducing duplication.

An intergovernmental approach to technology implementation combined with innovations and an open exchange of information will naturally lead to changes in the public perception of government. Government may become more trusted and be seen as more responsive to citizen needs if technology is used to benefit the citizen -- and government is seen as more unified and coordinated.

Intergovernmental cooperation played a significant role in the efforts achieved by the IITT Task Force and its work groups. Through the collaborative efforts of local, state, and federal departments and agencies, work group and Task Force members became more aware of how they can interact with one another on technology projects that will best benefit citizens as well as make their own agencies more efficient in providing services. Participants were energized to work together because the mutual benefits were apparent. Involvement of a broad base of individuals in intergovernmental planning is essential, and an open process is even more vital to success.

To ensure the intergovernmental cooperation efforts that were initiated through the Task Force continues, it is recommended that the Task Force continue to provide at least an advisory role to the Iowa Information Technology Services (ITS) which will implement the projects.

In addition, the ITS is encouraged to use the expertise of work group members who were instrumental in outlining the projects to develop and implement them as well. These individuals, who represent all levels of government, can provide

continuity to project development as well as assure communication among agencies at all levels is achieved.

The Need for Private Sector Involvement

When government talks about involving the private sector in the development and implementation of technology efforts, it is often interpreted as hiring the private sector as a consultant or vendor, or to outsource. That is not what this section discusses. Instead, it speaks to the need for private sector integration to ensure government systems are interoperable with the private sector and the public.

While discussion may concentrate on the need for private sector telecommunications expertise in developing a virtual government, the private sector is more than just technology and telecommunications providers. Private business and industry, both large and small, could play a large part in developing partnerships that benefit both the private business and government.

By involving the private sector in planning, development, and implementation, value is added to government technology projects while at the same time benefiting Iowans and helping all players achieve common goals. The private sector, especially telecommunications representatives, can provide innumerable assets and expertise to enhance the quality of government services with state-of-the-art and emerging technology.

The private sector can add value to government technology in several ways. Businesses that manage telecommunications and technology activities on a daily basis have the skills and experience to suggest more efficient uses of limited government resources. However, it is incumbent on government to make sure that private sector representatives are not at the table only to obtain a contract with the State. This type of relationship could skew their recommendations to a proprietary approach that benefits their business. Instead, individuals should be selected because of their innovation, ability to see past proprietary interests, and bring many private sector companies together to resolve issues.

It should not be surprising that many private businesses are years ahead of government in deploying and using information technology. The dynamics of the telecommunications industry dictates high investments in technology and training to keep pace with the latest innovation. Small businesses were slower to react to changes than their large, Fortune 500 counterparts. But technology is making those small businesses more competitive with large companies, and can offer the same efficiencies to government.

However, government is tax-supported and large investments in technology are not always possible. Decentralized government contracting and purchasing procedures can add to the confusion and expense. Government is responding to that specific need -- the federal government has already begun its effort to reform procurement procedures and the State of Iowa is following suit with its own plan.

By partnering with the private sector, government could leverage resources to reduce duplication and encourage innovation. Existing private technology infrastructure could be utilized by the government without substantial initial investment, through lease,

lease/purchase, or fee for service. Private sector representatives can also assist in developing and designing systems that are interoperable while also benefitting citizens.

With their experience and knowledge, private sector representatives can also suggest innovative and cost-effective solutions to technology problems, thereby enabling a more efficient government. Technology applications and opportunities that may otherwise be unknown to government may also be suggested by the private sector. A partnership between the public and private sectors can also be mutually beneficial in accelerating the development of new technologies and applications, as well as creating mutual business opportunities.

The private sector can also play an instrumental role in determining and providing ideal community access points for citizens to conduct business with government agencies. They may even suggest a means to overlap their services with government services.

Similar to the US Postal Service arrangement with many grocery stores, private businesses can accommodate community Internet-based kiosks in strategic locations for easy access by citizens. Citizens benefit from this cooperative private-public partnership through increased options for accessing government services and information

outside traditional government office hours. Recent articles in the Des Moines Register suggest that Iowa's most public locations may be shopping malls and hospitals or physician clinics. These could be areas that government should concentrate efforts for Internet-based kiosks or terminals.

This issue needs to be flexible -- no proprietary approach should be selected. Private businesses need to understand that they may make an investment to purchase a kiosk or terminal for public access in a number of areas -- grocery stores, hospitals, shopping malls, or drug stores -- but that location and equipment is not dictated. There are a number of approaches that can work -- and all of those should be considered possibilities.

Because the private sector can provide insightful information to technology planning, it is recommended that Iowa Information Technology Services engage private sector representatives in developing and implementing projects and include them in future planning efforts. In addition, all levels of government should leverage private business resources and innovations to create mutually beneficial arrangements.

Intergovernmental efforts combined with meaningful private sector participation assures a technology planning and implementation process that benefits Iowa citizens while making efficient use of scarce resources.

BARRIERS TO TASK FORCE VISION

The IITT Task Force has charted a course to a new vision for government, one which uses technology to create a virtual government that meets the needs of citizens and government alike. However, realistic plans must address barriers to successful implementation. The IITT Task Force did this through the efforts of the work groups, and developed a set of recommendations, presented in the Roadmap section of this report, to address these barriers.

Barriers are both real and perceived. Overcoming real barriers is often less of a challenge than addressing the perceived barriers, because the latter requires an effort to change human characteristics and attitudes about technology and government. Some of the barriers identified in detail and summarized here are easily resolved, while other present serious challenges to the way governments interact with each other, their customers, and the private sector. However, none of these barriers is insurmountable.

While the work groups discussed specific, very detailed barriers, the IITT discussed them in broad terms. These common themes are outlined briefly below. The work group reports offer a more detailed description of the barriers and resolutions.

Changing Environment
Government is not prepared to respond to the changing environment, and there are a number of bureaucratic challenges to this need for preparedness. The need to match developments in technology with the rising demand for accountability and outcome-based results could require a considerable effort. Managing cultural change within government can become a significant issue.

Technophobia
Citizens, as well as government personnel, may feel intimidated by technology or feel they do not have the knowledge needed to operate the technology. In addition, citizens may not be aware of the types of technology currently available and how it can be used to their benefit. Citizens may also fear a loss of privacy and not understand how technology can protect information contained in a system. The fear of the unknown -- how technology will affect you, your job, and your environment -- can limit use of a virtual government.

Resistance to Change
Resistance to change is more a symptom than a cause. Many fears and concerns may cause resistance to change. Citizens may be technophobic or concerned about losing one-on-one government interaction. Government personnel may be concerned that technology will eliminate the need for their jobs, or feel threatened by younger, more technologically literate colleagues.

These concerns, if not addressed in the design of a virtual government and through a marketing plan, may lead to resistance to change. There are some citizens that may never submit to the changes brought on in the information age. The challenge of government is to address the concerns of customers,

communicate how those concerns are addressed, and manage change as appropriately as possible.

Lack of Knowledge of Benefits
There is a general lack of knowledge among federal, state, and local governments on the benefits of technology. Citizens may not be aware of the benefits, or how large investments in technology will directly improve services to them.

Public Acceptance and Trust
There are a number of issues at play here -- ranging from concerns about privacy to questions of motivation. The public could lose a vital part of their interaction with government, if technology replaces contact with a real person. The public may not be comfortable with this change, and may feel that government is trying to become more remote rather than more accessible.

The public may also feel that their privacy is compromised. This could be both a real and perceived problem, depending on the security measures taken. There are no formal policies to ensure confidentiality protection and privacy on an enterprise-wide or intergovernmental level. Government will need to look at ways to balance the need for confidentiality with the need to make a certain amount of information available to deliver services.

Cost and Availability of Technology
Internet service availability and cost varies greatly across the state. Costs of technology can be very prohibitive for some communities and citizens. Citizens and tax-supported institutions, like libraries, may not be able to afford the connections, service charges,

hardware, and software required to create a link to government. In addition, technology upgrades and advances can require an almost constant need for investment. Government meeds to be able to demonstrate the cost benefits of technology, as well as the intangible benefits.

Lack of Interoperability
Incompatibility and a lack of coordination between, within, and among levels of government is a real barrier that government will need to address when planning either on an enterprise-wide or intergovernmental basis. Shared resources implies the need for compatibility with other agencies and other levels of government, as well as the public and private industry. In addition, the lack of common definitions, e-mail systems, and protocols is a barrier to cooperation. Interoperability among all sectors and the public is essential for the creation of a seamless government.

Government Structure
The current "silo" systems of government are themselves a barrier to intergovernmental cooperation and a seamless system. Devolution and many changes on the federal level will test the current structures and may demand changes that allow more integration and cooperation.

Proprietary or Ownership Issues
Agencies may not want to share resources or cooperate with other levels of government for a variety of reasons. Projects which create a seamless system may not allow for individual ownership of outcomes and create a structure in which agencies vie for control instead of share their cooperative success. There may also be difficulty in protecting legitimate

agency or business interests -- and balancing those with independent needs for confidentiality and security.

Policy Barriers

Policy barriers can be either formal or informal, legislative or regulatory. Local governments are prohibited from using the ICN, and state and local governments are prohibited from accessing the FTS2000 system. Deregulation could also have an impact on intergovernmental efforts by making technology more or less available.

There are dozens of recommendations on how to deal with these issues. These solutions are most appropriately used when developing projects and restructuring systems and processes. However, there are several that have broad implications to government. These solutions are outlined in the Roadmap section of this report, as they begin to establish a general direction for government.

New Models

The goal of this process was to begin to develop a plan that suggests new models for intergovernmental partnership, using technology as the bridge. With changes occurring nationally, states are challenged to play a greater role in the delivery and design of a myriad of government programs. Rethinking the traditional structures and processes of government -- and assessing if they continue to function efficiently and effectively -- is a necessary by-product of these changes.

The IITT Task Force has reviewed the recommendations of the five working groups and has selected eleven (11) models that meet the goals and vision for the government of the future. In selecting these models, the IITT Task Force determined that the following types of projects should receive priority:

Direct Impact on Citizens
The Task Force acknowledged the need to give priority to models that directly benefit the citizen. Models which are customer-driven, include mechanisms for customer input, and directly benefit the citizen were given top priority.

Citizen Education
Technology and telecommunications are more than passing trends, but there continues to be a number of individuals unfamiliar with computers and other technologies. Models which train and educate citizens on the use of technology were given priority by the Task Force.

Intergovernmental Participation
The Task Force agreed to recommend only models that have an intergovernmental component. More than one level of government needs to be included in these recommendations.

Local Government Participation
Local governments deliver a wide range of services to citizens, and may play an increasing role in the delivery of state and federal programs in the future. As the governmental level closest to the citizen, the Task Force agreed to give priority to models involving local government partners.

Private Partners
The Task Force recognized the expertise and innovation found in the private sector, and also acknowledged the limited resources of government. Therefore, the Task Force gave priority to models which engage the private sector as a partner.

Platform for Future Development
Models that become platforms for future developments were also given priority status. These models would be starting points for new and expanded innovations in the delivery and presentation of government services and information.

Template or Model Projects
The Task Force recognized the need to prioritize models which could be replicated in other states or communities -- or on other levels of government.

Realistic Chance for Success

The Task Force considered models with realistic chances for success, particularly those which clearly stated the responsibilities of each participant and outlined the associated cost. Models that had high costs attached to them were not considered very realistic.

Value-Added Projects

The Task Force gave priority status to models that increased citizen capacity for access to services.

Process Improvement

Models which streamline government processes and expand the capacity of government to better meet the needs of its customers were considered a high priority. These models substantially improve government processes for the customer.

Sustainability

The Task Force discussed the need to identify and prioritize models that will be sustainable. Pilot projects need plans for statewide implementation, and models with a long-term dependence on a single or short-term source of funding should not be considered.

The following 11 models begin to bridge local, state and federal government. They were selected from the 21 recommendations submitted by the IITT Work Groups because they very clearly represented the approach set forth by the IITT Task Force.

Rather than rank these models, the Task Force divided them into two categories. The top six models provide an excellent opportunity for government to begin interacting with citizens seamlessly.

These six models all fit together as elements of a greater "Citizen Information Network" and deal largely with the electronic exchange of information and the training of citizens to use such technologies. These models help create the foundation and platform for a virtual government.

The second tier of priorities -- the next five models -- represent the second tier of IITT priorities. While these models form the second tier, they also provide a great benefit to the citizen and can be incorporated into the virtual government base. They too fit under the umbrella "Citizen Information Network."

Below are the first and second tier priority models selected by the IITT Task Force. It should be noted that these are listed alphabetically, and are not in order of importance. Likewise, these models are not categorized by immediacy. There may be a need to implement a second tier priority before a first tier priority may be designed.

These models were selected according to their merits, and the benefits they offer citizens and other government customers. They meet the criteria developed and begin to build a platform for the virtual government. An outline of each model follows this section. The work group that recommended the project is noted in parentheses, and the page number where this model appears is noted for reference.

While ten other recommendations presented by the Work Groups were not chosen as a IITT models, they present additional opportunities for intergovernmental cooperation. All 21 models outlined in the individual work group reports are worthwhile pursuits and should be considered in future planning efforts.

The IITT determined a need to select a handful of intergovernmental technology models that could achieve some immediate successes -- and set the scene for future planning efforts. These recommendations should not be exclusive. When implementation begins, each level of government should be careful not to duplicate the efforts of ongoing projects and strive to integrate as much as possible.

First Tier Priority Models

Business License Information Center & Regulation Guide *(Recommended by General Government Work Group, see page 63)*

Citizen Information Network *(Recommended by General Government Work Group, see page 73)*

Electronic Commerce Plan *(Recommended by Electronic Commerce Work Group, see page 79)*

Iowa Geospatial Infrastructure *(Recommended by Geographic Information System Work Group, see page 83)*

Public Safety & Criminal Justice Data System *(Recommended by Criminal Justice & Public Safety Work Group, see page 93)*

Statewide Service Information & Enrollment System *(Recommended by Human Services Work Group, see page 107)*

Second Priority Models

Comprehensive Intergovernmental Data Access Facility *(Recommended by Human Services Work Group, see page 115)*

Courthouse Connections to Fiber Optics *(Recommended Criminal Justice & Public Safety Work Group, see page 121)*

Electronic Transfers of Client & Case Information *(Recommended by Human Services Work Group, see page 127)*

Emergency Management Transmissions *(Recommended by Criminal Justice & Public Safety Work Group, see page 131)*

Virtual Service Counter *(Recommended by Electronic Commerce Work Group, see page 135)*

Business License Information Center & Regulation Guide
IITT First Tier Priority

Work Group: General Government

Short Description of Project

There are two distinct parts to this project -- the first is the development of a "first stop" business license information center and the second is the development of an electronic Regulation Guide, which provides local governments with a number of project checklists.

Business License Information Center (BLIC)
This component will streamline the process of providing business license and permit application by creating a single "master" license form which would begin the application process, and provide additional business development assistance on financial and technical assistance programs to reduce start-up timelines. IDED would intake information through the initial master form and electronically transmit to each appropriate agency for processing, customer follow-up, and final approval of permits.

Regulation Guide
This second component will create an electronic Regulation Guide that provides county and municipal governments and school districts with a compendium of governmental regulations, guidelines, and administrative rules for specific projects of interest. This guide will list the project -- then provide information on rules/regulations as well as a check off list of permits, applications, licenses, and other documentation needed to pursue that specific project. The guide will include technical assistance pointers.

This project involves participation of:
- ✓ federal government
- ✓ state government
- ✓ local government
- ✓ private sector

This project impacts the following IITT Plan work groups:
- ❑ criminal justice & public safety
- ✓ general government
- ❑ human services
- ✓ electronic commerce
- ✓ geographic information system

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This project is: ✓ a new project *(Regulation Guide)*
✓ an expansion of an existing project *(BLIC)*

Benefits to Iowans

Iowans will benefit from this project through:

• A convenient, effective, and timely system for start-up and expanding businesses to obtain the licenses and permits necessary to conduct business.

• A true-first stop center staffed by IDED, with multiple access points including 24 hour telephone messaging, document faxback, and Internet capabilities.

• A reduction of paperwork and improved response time by state government.

• Reduced contacts with the multiple agencies currently necessary to identify and obtain the correct legal documentation to establish a business in Iowa.

• An informative, convenient, easily accessible system for citizens and local government officials to obtain helpful information on economic development and business assistance programs.

• The Regulation Guide will provide information in one place to support local governments in initiating and planning for projects.

• Citizens would benefit from the Regulation Guide through increased local government efficiency and quicker up-front time in pursing projects.

Project Participation

Project Leader and Service Provider
An umbrella organization with representatives from the Iowa Department of Economic Development -- Technology Services, Small Business Resource Office, county and local governments, and US Department of Commerce -- Small Business Administration will guide this project.

BLIC: Project Manager
               Iowa Department of Economic Development

Project Participation (continued)

<u>Participants</u>
Iowa Department of Revenue and Finance
Iowa Department of Inspections and Appeals
Iowa Department of Agricultural and Land Stewardship
Iowa Workforce Development
Iowa Department of Commerce
Iowa Department of Natural Resources
Iowa Department of Transportation
Iowa Department of Public Safety
Iowa Department of Public Health

<u>Non-participating organization/agencies to be kept informed</u>
Chambers of commerce
Local economic development agencies
Small Business Development Centers

<u>Customers</u>
Business Customers
Citizens
Local Governments

Guide: <u>Project Manager</u>
Councils of Governments (COGs)

<u>Participating Entities</u>
Engineering Society
Federal Agencies
State Departments
State Library of Iowa
Iowa State University Computation Center
Iowa State Association of Counties
Iowa League of Cities
Iowa Library Association

Project Detail

<u>Business License Information Center (BLIC)</u>
Every state agency that requires a commercial business to obtain a permit, license, or regulatory approval provides the IDED with the information detailing the regulated activity, required permit, application process, contact, fee, and time line (Code of Iowa Ch. 15E.17). This information is maintained in a database by IDED and is operated as the Business License Information Center (BLIC). BLIC works with start-up and expanding businesses to identify the requirements necessary for legal business operation in Iowa. BLIC prepares a packet of information for the specific business type which identifies the licenses necessary and the agency contacts to

Project Detail *(continued)*

obtain and the agency contacts to obtain them. The IDED believes state government can improve the efficient and effective delivery of business license, permit, and regulatory agency information for start-up companies.

IDED proposes to streamline the process by creating a single "master" license form which would fully identify the licenses necessary for specific business operations, begin the application process, and provide additional business development assistance to reduce start-up time lines. IDED would coordinate with other executive department to create and implement the new master license form and system. IDED would intake information through the initial master form and electronically transmit to each appropriate agency for the processing and final approval of each individual permit.

- The umbrella organization representatives and the participating agencies will create and implement the new "master" license form and business/economic development information packet and system.

- Small Business Resource Office will seek the input and updates for Business License Information from all participating agencies.

- Small Business Resource Office will be responsible for collecting information from customers and transmitting this information electronically to each appropriate agency.

- The participating agency will be responsible for final approval, collecting fees, issuing permits, and the renewal process.

- SBRO will perform customer satisfaction surveys and feedback loop for process improvement.

State Government will benefit from this project in the following ways.

- Reduction of staff time and information costs associated with the routine, repetitive, attention to non-technical questions.

- A centralized repository for state agencies to store, retrieve, and exchange license information electronically.

- A method to consolidate and eliminate obsolete and duplicate licenses and application processes.

- A method to identify all new business firms and their location.

- Establishing benchmarks for regulatory agency response and performance.

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Project Detail *(continued)*

- The development of a model program for state government efficiency and increasing the pro-business reputation of Iowa.

Iowa citizens and local government officials will benefit from this project in the following ways.

- A convenient, effective, and timely system for startup and expanding businesses to obtain the licenses and permits necessary to conduct business.

- A true <u>first-stop center</u> staffed by IDED, with multiple access points including 24-hour telephone messaging, document faxback, and Internet capabilities.

- A reduction in paperwork and improved response time by state government.

- Reduced contacts with the multiple agencies currently necessary to identify and obtain the correct legal documentation to establish a business in Iowa.

- An informative, convenient, easily accessible system for citizens and local government officials to obtain information helpful on economic development and business assistance programs.

The development of this system does not remove the authority or staff review of license issuance or renewal or reallocate license fee revenue.

<u>Regulation Guide</u>
This project involves the development of a web page -- called the Regulation Guide -- that provides step-by-step information on projects conducted by local governments. This Guide would supply a local government with information on federal, state, and local regulations, rules, and guidelines on these specific projects. An individual may access the page through the Internet, click on a project they are considering, and obtain information on steps they need to take, permits and licenses they need to obtain, and contacts for technical assistance. Areas of possible use would include regulatory requirements for any project requiring a permit sign-off or review, such as DNR water or sewer projects, public building construction requiring fire and handicapped permits, DOT construction projects, and historical projects. Other areas include OSHA compliance, health regulations, and civil rights discrimination.

There are four phases to this project -- assessment, development, awareness, and maintenance.

Project Detail *(continued)*

- Assessment Stage
  The initial stage would be an assessment of those areas where local governments want a collation of material. Iowa's councils of governments currently assist local governments in pursuing projects of many kinds. The COGs would perform this assessment by working with local governments and helping identify projects to be included on the web page and organizations to be listed as assistance sources.

  Engineers are actually the people that complete the permit forms for a number of projects. Working with the COGs, the Engineering Society could help identify important information to be included and local contacts for engineers. It should be noted that the actual permit completion would not be done online, but that the information be presented electronically.

- Development Stage
  After a topic list is developed, the next stage would be to obtain the necessary material, develop short descriptions, and place it in a web accessible database.

  State government would draw together those regulations, guidelines, and administrative rules which impact the topics specified. A brief description of the regulation, guideline or rule and directions to the specific reference would be listed under the topic. This project would include state information and, eventually, federal information. This project could be considered as an subset of the Governmental Information exchange, one that focuses on particular information.

  The Councils of Governments would compile the information supplied by state, federal, and local governments -- and obtain commitments from departments to provide updates.

  With respect to federal data, the state becomes a customer along with local governments. The articulation of topics where a collection of material is needed can be suggested as a pilot project under the federal efforts to establish facilities such as the Governmental Information exchange.

  The State could look for private partners in this project, or work with the Iowa State University Computation Center, to design, develop, and update the web page quarterly or biannually.

- Awareness Stage
  A further and necessary stage of this project would be to develop the awareness in those parts of state government that develop regulations, guidelines, and rules that this resource exists and to develop agreements to update the database as modifications occur.

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The Iowa State Association of Counties, the Iowa League of Cities, Library Association, and other local government associations should be involved in information gathering, surveys of their members, and most importantly, developing awareness for this page.

- **Maintenance & Update Phase**
  This phase is ongoing. The COGs would also be responsible for assessing use of the Guide, gathering updates, and assessing satisfaction with the Guide. The Computation Center -- or other private provider -- would be responsible for technical maintenance and updates. Each state and federal agency are responsible for updating their own information -- or if that is not possible, sending updates to the administrator to be updated.

Timeline

1. 3 months
   - Analysis data elements
   - Develop input forms
   - Identify major license/permit requests
   - Multi-agency cross reference links
   - Existing systems analysis/inventory
   - Work with COGs and others to determine elements of Regulation Guide

2. 6 months
   - Business focus group input
   - Establish 2 links to agencies -- Departments of Revenue and Finance and Workforce Development -- as models
   - Establish 2 links to local government agencies (county recorder, office of planning and zoning, or permit center)
   - System designs
   - Tie to STAWRS project
   - Regulation Guide Web Page designed
   - Assessment Phase completed for Regulation Guide

3. 12 months
   - Expand to regulatory agencies and further local government agencies
   - Total system integration
   - Development Phase completed & Awareness Phase started for Regulation Guide

Project Analysis

BLIC Total Cost: $225,000

Initial (3-6 months) -- $75,000
- Hardware
- Software
- Communications charges analyses
- Development, planning and initial implementation

Long Term -- $150,000*
- Funds 1 FTE
- Linking to existing agency systems
- Minimal training
- Greatest unknown would be the cost of systems integration*

Guide Total Cost: $120,000 - $140,000
The total estimated cost of this project is $120,000 - $140,000 for the first year and $25,000 for each year after. This maintenance amount could be cut to $5,000 if state, federal, and local departments took responsibility for updating their own information in the Guide.

- Assessment Stage -- $35,000 - $45,000

- Development Stage -- $55,000 - $75,000
  --Information descriptions/gathering ($30,000-$40,000)
  --Web Page Design/Development ($25,000)

- Awareness Stage -- $15,000
  --Costs absorbed by associations
  --Time & travel costs to meet with organizations

- Ongoing Maintenance/Updates -- $5,000 to $25,000
  --Cost depends on need for entity to collect updates & oversee
  --If departments do their own updates, costs are very low

Funding Sources:
- General Appropriations - IDED budget - for ongoing costs.
- STAWRS - initial phase development work and testing.
- General Services Administration
- State Technology funding

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Benchmarks

BLIC:

Initial Phase - 3 months
- Development of master registration form.
- Coverage of common data elements.
- Systems identification.
- Develop requirements, harder budget and cost estimates.

Test Phase - 6 months
- Introduction to 2 state agencies and 2 local government agencies
  -- Department of Revenue and Finance
  -- Iowa Workforce Development
  -- County recorder
  -- Office of planning and zoning (or the local permit center)
- Initial integration with existing systems
- Measure of time/cost savings
- Interview customers focus groups

Expansion Phase - 12 months
- Expand to addition agencies
- Measure time/cost savings
- Business and citizen customer focus groups, online surveys, and other communications activities

Guide:
- An early assessment by surveying local governments on information and projects they would like to see on the web page will help provide early input into the process.

- After the first full year of web page's implementation, the Councils of Governments will perform an assessment to determine satisfaction and use of the web page.

- In addition, the assessment will address improvements in design and additional information people want to have available.

- Associations will be asked for their input on gathering information from their organizations.

- Additional assessments will be done as needed after the first year.

- An electronic suggestion box will be included on the web site, so that individuals may comment on what they like, don't like, and want to see posted.

Barriers to Project

- Internet Service
  There continue to be areas of the state that do not have affordable Internet service and many that do not have access to a local dial-up connection. This may make accessing the Regulation Guide difficult for many cities and counties, unless they live in proximity to a public library (which is hooked up to the ICN).

- Lack of Computers
  Many cities and counties do not yet have computers with modems capable of accessing the Internet -- and those that do may not yet feel comfortable with the Internet.

- Public Awareness
  Citizens will need to be educated about this process and the opportunities that are available through electronic business licensing.

Citizen Information Network
IITT First Tier Priority

> **Work Group:** General Government

Short Description of Project

This project will develop a seamless on-line Citizen Information Network for use by Iowans to access government information and services. The project has three parts:

- <u>Citizen Information Network</u> -- will link together federal, state, and local government information to provide a seamless government information network.

- <u>Model Web Page</u> -- develop model home page for use throughout Iowa

- <u>Training & Technical Assistance</u> -- develop Internet training package for use by citizens and public institutions and provide technical assistance on web page development (and linkages) to communities throughout Iowa.

This project involves participation of:

- ✓ federal government
- ✓ state government
- ✓ local government
- ✓ private sector

This project impacts the following IITT Plan work groups:

- ✓ criminal justice & public safety
- ✓ general government
- ✓ human services
- ✓ electronic commerce
- ✓ geographic information system

This project is:

- ✓ a new project
- ❏ an expansion of an existing project

Benefits to Iowans

Iowans will directly benefit from a seamless, online approach to government information delivery. A seamless Citizen Information Network will give Iowans and others wanting to obtain information from governments serving Iowans will be able to access a variety of information without regard to which level of government provides that information.

Iowans will be able to choose a subject -- say "services and opportunities for individuals with disabilities" -- and obtain information from a number of agencies in the federal, state, and local governments. Contacts would be available, so the person may write, phone, or immediately E-mail the contact with questions and requests.

Iowans also become more technologically advanced as they begin to use electronic mediums to obtain government information. This project will assist in educating the public on using the Internet and developing home pages on the world wide web.

Businesses stand to benefit not only from being able to access intergovernmental information on business assistance, census information, workers compensation, procurement opportunities, and a number of other business-related information sources -- but they also benefit from instructional training on using the Internet and developing web pages.

Economic development is enhanced as Iowans become more technologically literate and businesses are able to conduct business with the government (and obtain information from the government) without leaving their communities.

Local governments benefit from this seamless approach by having their information online with the State and Federal governments. Businesses wanting to search on local community economic development initiatives and local demographics in Iowa to find a suitable site for relocation will be able to access such localized information -- coupled with their knowledge of state and federal programs -- to make preliminary decisions.

Local governments also benefit from becoming more technologically advanced. Model web pages -- and the accompanying technical assistance -- will bring more local communities online. Citizens will benefit from this new level of government being accessible electronically.

Project Detail

The project will include the following:

- Linking together various governmental home pages provided by federal, and Iowa state and local governments to provide a seamless citizen information network for use by Iowans to access government information and services

- Enhancing the current systems (Iowa State homepage and the Federal Government Information Exchange homepage) to ensure that services are reliable and accessible when needed

- Organizing these intergovernmental home pages so that Iowans can find the information easily

- Coordinating the development of a model home page for use throughout Iowa and providing technical assistance on home page development to small communities

- Developing Internet training materials and services for use by public agencies

- Developing an overall "umbrella" through which on line Internet Service via public agencies may be provided

- Piloting a select group of on-line services to be offered on the network

Citizen Information Network (CIN) Development

This component will include the development of the intergovernmental home page, called the Citizen Information Network, and develop links to other government home pages. This will require an up-front assessment of home pages available in all levels of government, and information available through those pages.

This component will also enhance the current systems to ensure that the services are reliable and accessible when needed. The CIN will need to present information in a customer-friendly manner. Tests should be done with focus groups and others to ensure that the information is customer friendly.

During this time, government agencies will need to be engaged to educate them on the process, the need for updating the information regularly, and the importance of the process.

Finally, this phase will, working with local government associations and through a series of focus groups with local government officials, develop a model home page for communities. This model home page will include instructions on making and communicating linkages with the CIN. This phase will also include a public awareness campaign through local government associations and focus groups on the need for

Project Detail *(continued)*

this system and an explanation of its development. The project also calls for a technical assistance component to the web page development. This may be through an 800# and a training manual. Public libraries and local government associations may receive a "train the trainer" packet, so that trainings may also be conducted outside state government.

This project will also assess use and expansion of the CIN before and at regular intervals -- and review customer comments sent online. This will help guide the future development of the network and determine customer satisfaction.

Training and Technical Assistance
This component will include the development of training materials on the Internet. General Services Administration has provided an excellent training on CD-ROM for use in the State of Iowa. This training tool will supplemented with training manuals and a "train the trainer" set that will help develop training capacity throughout the state.

Trainings will be conducted by a state trainer -- and "train the trainer" trainings will also be conducted. Local government associations and other citizen contact organizations will be enlisted during this component.

Technical assistance will be available to local governments wanting to use the model web page and get it online. A series of meetings around the state may be held to inform local governments of the CIN opportunities. Ongoing trainings and technical assistance will add to the ongoing costs of this project, but are essential for the CIN to be used.

Project Analysis

Assessing available federal, state, and local government information -- and then creating a home page with logical links to appropriate information sources -- is a huge task that may need to be phased in over several years.

The anticipated total cost for this project is: $400,000

- Citizen Information Network -- $250,000
  This is a very time-consuming process -- the project coordinator will need to identify information available at all levels of government, establish an overall umbrella system, link together intergovernmental home pages, enhance current systems, and coordinate the development of model home pages. This component also includes focus groups to obtain information from citizens and governmental agencies on the development of a model home page and technical assistance in using these home pages.

Project Analysis *(continued)*

- <u>Training, Technical Assistance, & Model Web Page Development -- $150,000</u>
  This component addresses the continued development of Internet Training materials for public agencies. General Services Administration has donated an Internet CD-ROM version, but this should be supplemented with a training manual and a "train the trainer" series, so that local libraries and public agencies may conduct their own trainings.

This project will make government more effective for the citizen who wants to easily obtain information or access a governmental official. Electronic messaging and links to home pages will give citizens a seamless look at government information -- and the platform for electronic commerce pilot projects.

This project lays the groundwork for a number of other seamless approaches to citizen interaction with government -- and government interaction with government. The project may eventually cut down on administrative expenses and employee time spent obtaining information for customers.

With a wealth of government information publicly available in easily obtained formats, this project also makes significant progress toward restoring the public's faith in government.

Citizens are not the only benefactors in this project. Government bureaucracies are difficult for government agencies to break through as well. Government agencies will be able to access information from other government agencies -- federal, state, and local alike -- and better understand the linkages. Governments may access information from each other more easily, making government more efficient and effective.

Benchmarks

- <u>Assess number of web pages developed after model is provided</u>
  --Number of public agencies and local governments online before, during, and after

- <u>Identify the number of individuals participating in trainings</u>
  --Trainings sponsored by CIN
  --Trainings conducted by local libraries and public agencies
  --Trainings offered by local government associations

- <u>Determine number of "hits" on the CIN</u>
  --Number of times the CIN was accessed

Benchmarks *(continued)*

- Assess government participation
  --Each level
  --Overall
  --New information added
  --Update regularity

- Review customer comments
  --Service will have an online comment box the customers are encouraged to use
  --Reviewed regularly and constructive comments will be compiled for updating page

Barriers to Project

1. Privacy Concerns
   Some citizens and government agencies may be concerned about the confidentiality of the information presented on the home page. A public awareness campaign should take care of many of these concerns -- and address future concerns about privacy in electronic commerce.

2. Lack of Public Awareness
   Unless a good public awareness campaign is launched -- as a series of public information segments, in the free media, and through associations and organizations -- the public will not know what is available, how easy it is to use it, where they can go to use it, and why this service is valuable to them.

3. Lack of public access terminals
   While most of Iowa's public libraries have access to the Internet and supply their patrons with public access terminals, they may not be able to meet the increased demand for connectivity. Time limitations and capacity limitations may make accessing and downloading information difficult.

4. Lack of Internet connectivity
   Not all areas of the State have local dial-up access to the Internet, making service cost-prohibitive in some areas. However, many libraries are connected and do offer the service. Public knowledge of where to go to obtain access can alleviate some of problems this barrier creates.

5. Government Proprietary Concerns
   Some public agencies may not want to share information with others for a number of proprietary reasons. Government leaders will need to make information sharing a priority and executive empowerment may help some agencies understand the need to share and present information seamlessly.

Electronic Commerce Plan
IITT First Tier Priority

Work Group: Electronic Commerce

Short Description of Project
Identify and analyze intergovernmental opportunities for electronic commerce and develop a business plan consistent with public policy goals and priorities.

This project involves participation of:
- ✓ federal government
- ✓ state government
- ✓ local government
- ✓ private sector

This project impacts the following IITT Plan work groups:
- ✓ criminal justice & public safety
- ✓ general government
- ✓ human services
- ✓ electronic commerce
- ✓ geographic information system

This project is:
- ✓ a new project
- ❑ an expansion of an existing project

Benefits to Iowans

- ✦ Simplifies doing business with government
- ✦ Increases private sector opportunities
- ✦ Cost savings

Project Participation

The state Information Technology Services should lead the planning process and both policy and technology leaders should participate.

Project Detail

Phase I
State Executive Branch agencies through an enterprise wide planning process will develop an electronic commerce business plan. The plan will included incentives to increase electronic commerce and foster interagency cooperation.

Phase II
Local government, federal agencies and judiciary will be added to the planning process to identify intergovernmental electronic commerce opportunities.

Phase III
An analysis of electronic commerce opportunities will be completed including the return on investments, then opportunities will be prioritized.

Phase IV
Implementation will be achieved through private/public partnerships.
Each executive branch agency must provide support to the development of a business plan.

The project should be coordinated with the current plan for the development of an enterprise information technology system. Much of the infrastructure for the implementation of electronic commerce will be dependent upon the ability of the state to establish an enterprise information technology system.

The standards utilized in the enterprise system should be developed taking into consideration the technology utilized in the private sector.

Project Analysis

The initial one time cost to develop the plan is estimated at $60,000.

The on-going cost of the project will be determined as the business plan is developed. There should be some offsetting savings for reinvestment.

Funding sources
Several foundations offer grant opportunities for intergovernmental or technology planning. Further, many technology vendors may be willing to make investments in planning because of the promise of future investments.

The on-going costs of implementing the electronic commerce opportunities will need to be included in each of the participating agency's budgets.

Benchmarks

Intergovernmental consensus on a plan and priorities is a significant benchmark. Strategic investments will achieve measurably improved customer service and lower service delivery costs.

Barriers to Project

- ✦ Lack of infrastructure
- ✦ Resistance to change
- ✦ Lack of standards and common solutions
- ✦ Costs of providing the access to both government and the public
- ✦ Education and training
- ✦ Public acceptance and trust
- ✦ Security
- ✦ Confidentiality of information

Iowa Geospatial Infrastructure
IITT First Tier Priority

Work Group: Geographic Information System

Short Description of Project

This project will establish an ongoing geospatial information coordination infrastructure that will be based within the Iowa Information Technology Services Department. This infrastructure will provide for:

- Coordination of intergovernmental and private sector GIS development
- A clearinghouse for geospatial data and metadata
- Coordination of GIS educational efforts at all levels in Iowa, and
- Linkages with federal and interstate GIS programs

The ultimate result of this project will be improved access to geospatial information and analysis tools for Iowans at all levels of the public and private sectors.

This project involves participation of:

✓ federal government
✓ state government
✓ local government
✓ private sector

This project impacts the following IITT Plan work groups:

✓ criminal justice and public safety
✓ general government
✓ human services

✓ electronic commerce
✓ geographic information systems

This project is:

✓ a new project
✓ an expansion of an existing project
This is a new project added to an existing project

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Benefits to Iowans

Iowans would benefit enormously from the expanded use of GIS in both the public and private sectors. To achieve the goal of widespread, efficient use of GIS in the public sector, public institutions and organizations, along with units of local government, will need to share fiscal resources and technological expertise, develop cooperative GIS training programs, and develop guidelines regarding data format, access, and retention.

This effort will enable geospatial development efforts to be improved by:

- ensuring that Iowa's investment in GIS and related technologies is not wasted through redundancy

- improving service delivery efficiency

- expanding Iowa's access to federal funds

- providing a framework for addressing the issues of training and data distribution; assessing and prioritizing needs, and; developing a strategic plan

- improving access to public records

- promoting cooperative decision making

- facilitating cooperative agreements

- facilitating standards and policy development for GIS data

- leveraging resources to maximize the impact of GIS development

- fully utilizing existing resources such as the Iowa Communications Network to support GIS development in Iowa

Every citizen in Iowa will ultimately benefit from the establishment of an Iowa Geospatial Infrastructure:

Agriculture
Improved yields with lower input costs and improved environmental quality; better business management and improved profitability

Business Logistics
More productive use of transportation equipment (e.g. trucks, railroad cars, and airplanes); more efficient management of shipments and inventories

Defense
More effective military operations

Benefits *(continued)*

Disaster Services
  Quicker response to disasters

Economic Development
  Improved information for businesses interested in location or expansion; market
  analysis; tourist information

Education
  Improved teaching of subjects with a geographic component, improved student
  recruitment, and administration; improved educational opportunities for end
  users of GIS

Government Services
  Better planned, managed, and delivered government services

Human Services
  Better targeted human services programs; improved integration of human
  services with other government activities

Infrastructure and Utilities
  Improved management of infrastructure systems; greater productivity and lower
  costs

Land Use/Land Management/ Real Estate
  Better information for planning efforts; better planned cities and rural areas;
  better matching of real estate with appropriate land uses

Law Enforcement and Public Safety
  Improved deployment of police, fire, and emergency responders; more rapid
  response; allocation of scarce resources to areas identified as needing more
  attention

Natural Resources
  Improved management of natural resources; better environmental quality;
  improved public understanding and input on natural resources stewardship
  issues

Public Health
  Better information about public health trends and threats; faster response to
  epidemics

Research
  Discovery of new knowledge by combining information in new ways

Benefits *(continued)*

Retailing/Commerce
Improved location of retail establishments; more effective use of marketing expenditures

Taxation
Improved property tax administration; better targeting of tax audit resources

Transportation
Safer, more efficient transportation systems; improved system investment decisions

Project Participation

Iowa Geographic Information Council Steering Committee - Project leader
Information Technology Services - Participant
Iowa Department of Management - Participant
Governor's Office - Participant
Regents institutions - Participant and Service Provider
Councils of Governments - Service Provider
Community Colleges - Participant and Service Provider
Center for Transportation Research and Education - Participant and Service Provider
Iowa Department of Education - Participant
Attorney General's office
Professional Associations
Federal Geographic Data Committee's National Spatial Data Infrastructure
Competitive Cooperative Agreements program
Agency/organization liaisons
Business/Industry liaisons

Project Detail
The project consists of three integral parts:

1) a formalized Iowa Geographic Information Council (IGIC) and Coordinator
2) a federally-recognized, state GIS Clearinghouse
3) an IGIC coordinated state GIS Education Network

Project Detail *(continued)*

It is envisioned that the three parts would be related in the following way, under the auspices of the Information Technology Services (ITS).

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                    ┌─────┐
                    │ ITS │
                    └──┬──┘
 ┌────────┐   ┌──────────────────┐   ┌──────────────────────┐
 │ IGIC(1)├───┤ GIS Coordinator (1)├───┤ GIS Clearinghouse (2)│
 └────────┘   └──────────────────┘   └──────────┬───────────┘
                                                 │
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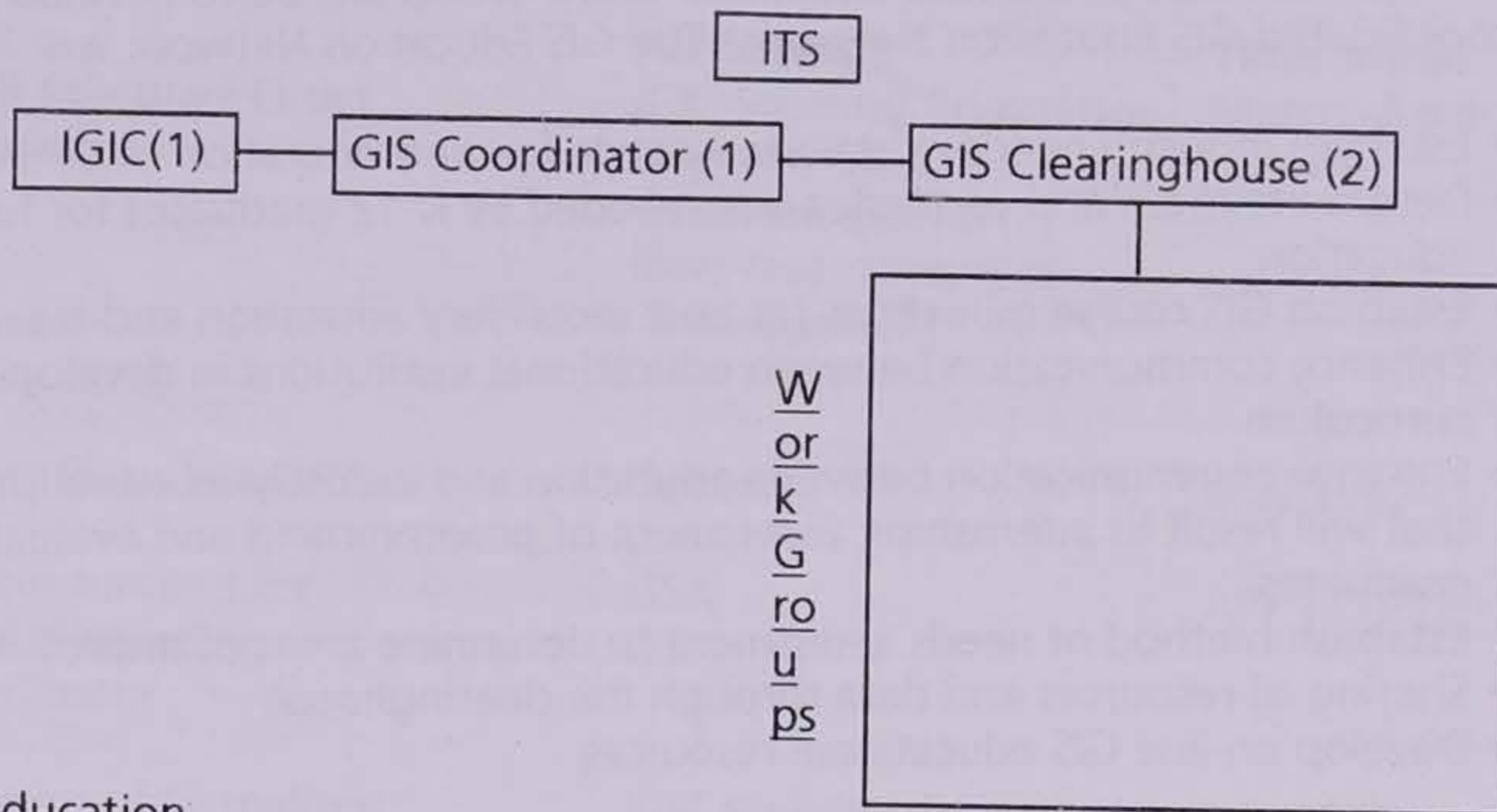
•Education

•Standards

•Outreach
•Land Records
•Others as needed
•Technology
•Research & Development

Formalization of the IGIC will be accomplished by executive order. The IGIC Steering Committee, the Director of ITS, the Iowa Department of Management, and the Governor's Office will participate in drafting the executive order.

The formalized IGIC will be responsible for:
•assisting and drafting the executive order
•establishing a formal organizational structure, vision, and mission
•developing a working plan
•developing a resource survey
•recommending positional parameters for GIS Coordinator
•facilitating Federal Geographic Data Committee cooperative agreement
•facilitating and participating in regional and state meetings and conferences
•forecasting and achieving project sustainability
•recommending representation to regional and national organizations

The functions of the GIS Coordinator will include:
•promoting GIS to legislators and professional organizations
•conducting survey and distributing results
•networking with other state coordinators and entities
•directing the Iowa GIS Clearinghouse activities

Project Detail *(continued)*

A major function of the IGIC Education Work Group will be to develop the coordinated GIS Education Network. The GIS Education Network will:

- Establish industry needs relative to knowledge and operation of GPS/GIS
- Determine math and computer skills needed by K-12 graduates for further GIS education
- Establish GIS course guidelines for post secondary education and training
- Enhance communication between educational institutions in development of curriculum
- Enhance communication between education and industry to establish linkages that will result in internships, assessment of programming and evaluation of graduates
- Establish method of needs assessment to determine areas of improvement
- Sharing of resources and data through the clearinghouse
- Develop on-line GIS educational resources

The GIS Coordinator will provide administrative support to the GIS Education Work Group. The GIS Education Work Group will provide periodic reports to the IGIC.

The GIS Clearinghouse will be responsible for the following:
- IGDC (data, metadata, search)
- Resource directory
  - People
  - List of organizations
  - Data
  - Links to other GIS related Internet sites
- Publications
- Training
- Vendors
- Job postings (opportunities available, looking for jobs)

The functions of the ITS will include:
- Informing legislature of IGIC/coordinate activities
- Assisting in developing state plan
- Assisting in formulating state standards policies
- Exploring legal issues with Attorney General
- Developing access policies
- Increasing local access to Internet
- Negotiate for multi-site software licenses for local governments

Project Detail *(continued)*

The function of the Councils of Governments and Community Colleges will be to promote and host regional meetings with IGIC.

Task	Participants	Time frame
Draft Executive Order	IGIC Steering Committee Director - ITS Governor's Office Iowa Department of Management	March -April 1997
Adopt Executive Order	Governor	May 1997
Obtain funding for project including coordinator	GSA ITS	July 1, 1997
Meeting of formalized IGIC to organize (officers, by-laws, vision, mission, goals, committees, etc.)	IGIC Steering Committee Additional members	July 1997
Recommend and define positional parameters for coordinator	IGIC	September 1997
Survey of existing data, hardware, software, contacts (Baseline)	IGIC	October 1997
Hire Coordinator	ITS	November 1997
Regional meetings (8)	IGIC Coordinator Community Colleges Councils of Governments	1st & 2nd quarters 1998
Complete Work Plan	IGIC/Coordinator	June 1998
Follow-up Survey	IGIC/Coordinator	Fall 1998
Secure continued funding	IGIC/ITS/Coordinator	December 1998

The coordinator will make presentations about GIS and the IGIC to professional associations and legislators in early 1998. The IGIC steering committee members will host mini-informational meetings at the regional level to assess needs, directions, and priorities, which will be utilized in developing the work plan.

Project Analysis

	1st Year Project	2nd Year Project
Formal IGIC/Coordinator		
GIS Coordinator salary/benefits (1.0 FTE)	$60,000	$30,000
Support costs	$20,000	$10,000
Outreach (newsletter, travel, surveys, regional meetings)	$15,000	$ 7,500
Total	**$95,000**	**$47,500**
Enhanced Clearinghouse (IGDC)		
IGDC staff salary/benefits (0.5 FTE)	$25,000	$12,500
Support costs	$20,000	$10,000
Equipment/software costs	$20,000	$10,000
Total	**$65,000**	**$32,500**
Statewide GIS Education and Training Program		
Publishing of GIS education plan/curriculum	$10,000	$10,000
Travel and meeting costs for subcommittee members	$10,000	$10,000
Facilitators, web development, ICN time	$20,000	$20,000
0.0 FTE; however, the GIS Coordinator will spend 15-20% of their time to this effort.		
Total	**$40,000**	**$40,000**
Grand Total $320,000	**$200,000**	**$120,000**

Notes:

Items 1 and 2 project dollars go to ITS. ITS will partially support these budget items with its own dollars starting in year 2 and fully support these budgets in year 3 onward.

Item 3 project dollars will go to IGIC.

Project Analysis *(continued)*

Other Potential Sources of Funds (Year 2)

$25,000   Federal Geographic Data Committee helps states fund clearinghouses -
- establishment of a formalized clearinghouse would greatly increase
chances of getting federal funds for the Iowa Geospatial Infrastructure.

$5,000   Matching funds for curriculum from individual educational institutions.

$42,500   State appropriation for half of GIS Coordinator and Clearinghouse staff
after one year.

$5,000   Annual Iowa GIS Conference proceeds (very limited)

$2,000   National States Geographic Information Council (also very limited)

Benchmarks

Survey: Baseline in Fall 1997, resurvey in Fall 1998
More agencies/applications/cooperative agreements

Regional meetings - input for formulation of work plan.
Coordinator presentations - educate legislators/local agencies.
Development of work plan by IGIC and coordinator.
Continued funding secured.
Recognition by Federal Geographic Data Committee.
Agencies draft multi-year plans for GIS use.
Increased use of clearinghouse.
Directory of services (from survey).
Increase participation of organizations signing IGIC Memorandum of Understanding

Barriers to Project

Barrier   Lack of understanding of benefits of GIS and related technologies
among policy makers.

Barrier Response   GIS presentation at Department Director's meetings to solicit
support and educate the policy makers. The current members
of IGIC should prepare material and script for presentation
and select knowledgeable presenter.

Barriers to Project *(continued)*

Barrier Lack of legislation or executive order authorizing and empowering an IGIC entity to coordinate inter- and intra-state GIS program delivery.

Barrier Response Seek lobby support from current ITS Director and policy makers.

Barrier Lack of formal authority for IGIC.

Barrier Response Recommend ITS sponsor IGIC.

Barrier Lack of administrative support for IGIC

Barrier Response Recommend IGIC support within ITS

Barrier Lack of Funds for salary, staff support, equipment, web server, hardware and software, travel expenses, overhead, and program delivery materials (e.g. materials, mailings, software).

Barrier Response Recommend that this GIS proposal receive IITT funding. ITS to sustain project after year 2.

Barrier Lack of support in implementation of Iowa Geographic Data Center (IGDC).

Barrier Response One desired outcome of this proposal is that there will be an increase in support for the IGDC.

Barrier Lack of Training Resources, new and developing technology, classroom hardware, classroom software, coordinated GIS curricula, communication (among K-12, community colleges, private colleges, and Regents institutions), instructors, instructor development, and continual upgrading.

Barrier Response Project recommends that the IGIC Education Work Group develop a coordinated GIS Education Network to define issues and propose solutions.

Integrated Public Safety & Criminal Justice Data System
IITT First Tier Priority

> **Work Group:** Criminal Justice & Public Safety

Short Description of Project

Establish and maintain a secure, common data network for dissemination and sharing of emergency management, public safety, criminal justice, and law enforcement information among authorized users, based on need to know, through all levels of the public safety and criminal justice community in Iowa.

The system would be designed as an Intranet, using web server technology to provide the front end for databases, and browsers at the user level for simplicity and ease of use. Appropriate security measures, including passwords, private identification numbers (PINs) and transmission encryption would be employed to create multiple security and access levels as required to provide security for particular databases or fields.

Data systems eligible for full or partial sharing include the Iowa Court Information System (ICIS), Adult Corrections Information System (ACIS), the computer criminal history (CCH) database, sex offender registry, domestic abuse and protective order registry, and wanted persons file. The system would afford all subscribers an integrated electronic mail and file transfer capability, to enhance overall system efficiency.

This project involves participation of:
- ✓ federal government
- ✓ state government
- ✓ local government
- ❑ private sector

This project impacts the following IITT Plan work groups:
- ✓ criminal justice & public safety
- ❑ general government
- ❑ human services
- ❑ electronic commerce
- ❑ geographic information services

This project is: ✓ a new project
                            ✓ an expansion of an existing project
                            a new project that builds on current initiatives

Benefits to Iowans

- Increase the efficiency and effectiveness of Iowa's public safety and criminal justice community.

- Increase the safety of members of the Iowa's public safety community.

- Facilitate more informed decisions by key members of the public safety and criminal justice community, including judges, administrators, law enforcement officers, emergency care providers, and emergency response coordinators.

- Promote more coordination and cooperation by members of Iowa's public safety and criminal justice community, providing citizens better and more responsive service.

Project Participation

This project will be led by the Iowa Department of Public Safety. Participants would include the law enforcement community of Iowa, Department of Corrections, Department of Transportation, Parole Board, Judicial Branch, federal criminal justice and law enforcement agencies, the Iowa National Guard, Emergency Management Division, county emergency management offices, emergency medical service providers, weather service, fire service, 911 service providers, parole and probation service providers.

The Public Safety and Criminal Justice Arena

The Public Safety Arena

Corrections

Weather Service

Medical Community

Police

911 System

Fire

Probation

DOT

Public Safety

Federal

Parole

Judiciary

Sheriffs

EMD-Guard
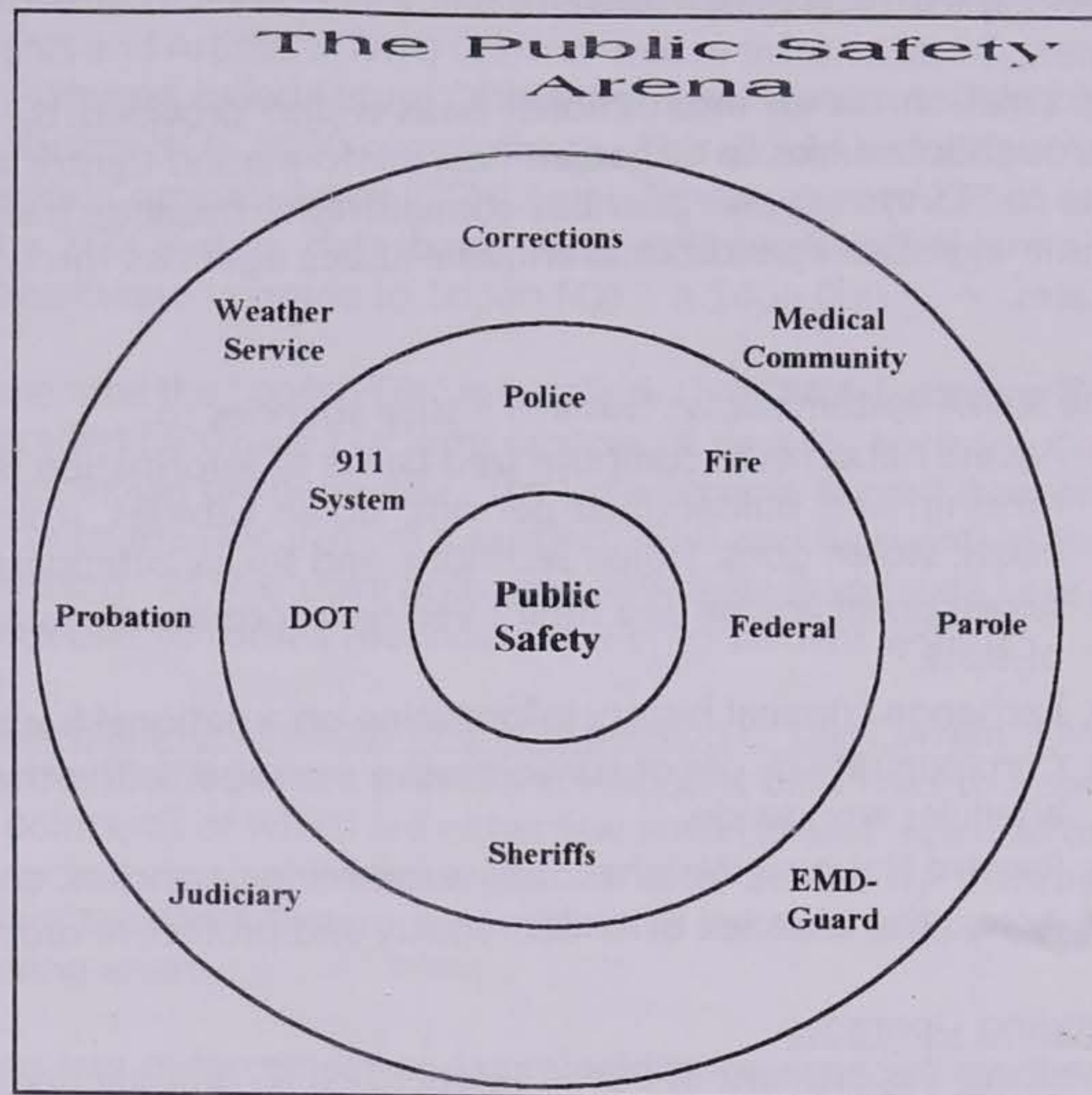
Background

The Iowa on-line warrants and articles (IOWA) criminal justice information system is administered by the Division of Administrative Services of the Department of Public Safety. The IOWA system, created pursuant to Iowa Code Sections 80.9(2)d and 692.14, provides criminal justice agency access to traffic record and criminal justice data bases through a dedicated telecommunications network. To be eligible for access to the IOWA system, an agency must be a criminal justice agency at the federal, state, or local level within Iowa, or an agency providing services to criminal justice agencies in Iowa.

The IOWA System is based on a Future Office Executive (FOX) system, lease-purchased from Computer Projects, Inc. of Illinois under General Services contract number 1422, in October of 1981 and upgraded periodically as needed. The IOWA system provides access to data bases from various state agencies within Iowa, from the Federal Bureau of Investigation's National Crime Information Center (NCIC), and from the motor vehicle departments of other states nationally through the National Law Enforcement Telecommunications System (NLETS).

Background *(continued)*

Information on an international basis is also provided by NCIC and NLETS through interfaces to Canadian Police Information Centre and to INTERPOL. The NLETS system also provides administrative message traffic between Iowa criminal justice agencies and criminal justice agencies throughout the United States.

The IOWA system allows criminal justice agencies to:
1) Access nationwide computerized banks of information including wanted, missing, and unidentified persons; stolen vehicles; stolen articles; stolen boats; stolen guns, stolen securities, and sexual offenders.
2) Access driver license and motor vehicle information in-state as well as out-of-state.
3) Exchange criminal history information on a national basis.
4) Communicate by use of administrative messages with other criminal justice agencies worldwide.
5) Receive National Weather Services warnings, watches, and statements.
6) Access the Iowa sex offender registry and protective orders data base.

Pending Upgrades
The Iowa Department of Public Safety (DPS) is currently upgrading the IOWA System by deploying a TCP/IP infrastructure throughout Iowa making use of the Iowa Communications Network. The Iowa Communications Network provides the equivalent of T-1 lines from the main hub in Des Moines to each local telephone area (LATA). Each T-1 line terminates in the U.S. West frame relay network, from which 56K lines will be dropped to each of the end points on the IOWA System. Currently approximately 40% of the end points have been upgraded to the new topology. As an adjunct to the upgrade, all 99 county emergency management offices are being linked into the network, creating a virtual Intranet or wide area network for the emergency management community, with its hub at the Emergency Management Division of the Department of Public Defense. The total system upgrade should be completed during the 4th quarter FY97 - 1st quarter FY98.

The Department of Public Safety also expects to upgrade current law enforcement software and hardware to remain compatible with the National Crime Information Center (NCIC) 2000 project during state fiscal years FY98 - FY99. Congress authorized the Federal Bureau of Investigation to spend over $70 million for the first major redesign of the NCIC system since its inception in 1967. The project, known as NCIC 2000, will have a substantial technical impact on the IOWA Criminal Justice Information System, and will require a significant financial commitment. NCIC is the primary source for the interstate exchange of criminal justice information.

Background *(continued)*

The Department of Public Safety also expects to upgrade the existing Iowa On-line Warrants and Articles (IOWA) Criminal Justice Information System Message Switching software called Future Office Executive Version V (FOX) to continue moving towards NCIC 2000 compatibility. This would include the addition of Computerized Criminal History (CCH) and Interstate Identification Information (III) to the FOX system data base. The estimated cost for the complete hardware/software upgrade to "open FOX" is $400,000.

At the same time the "open FOX" is installed, the IOWA System will be moved to an upgraded hardware platform capable of running both the "open FOX" and hot files should the need arise. The Data Services Bureau is recommending an upgrade to the Department's existing 3550 and its eventual move to the Hoover Building. At that point both the IOWA System and data base server will be tied together to form a redundant law enforcement system.

<u>Long Range Goals for Linkages to and Expansion of the Current IOWA System</u>
Currently the IOWA System provides continuous data links to approximately 190 end points, all of which are either law enforcement agencies or, in a few cases, selected criminal justice agencies such as county attorney offices. Expansion of the IOWA System, and additional linkages to it, are warranted in the following areas:

1. Existing law enforcement and criminal justice agencies can benefit from additional, more robust applications using the increased capabilities of the frame relay upgrade. For example, it should now be possible to expand beyond simple text-based databases, and begin to incorporate photographic and digitized fingerprint data in the shared databases. Project 1, the automated booking system, proceeds in this direction by proposing an integrated electronic, automated booking system for arrestees processed into Iowa jails and detention centers, in order to streamline the time officers spend processing prisoners and associated reports.

2. Expansion of the user community through additional network linkages would provide greater efficiency and effectiveness to the public safety and criminal justice community in general. Greater efficiency and effectiveness will result from making data currently on the system available to a wider universe of authorized users. Second, as the authorized user universe expands, a richer array of data will become available for sharing among the authorized users. Current subscribers on the IOWA System include offices of the Department of Public Safety, sheriffs' offices in each county, major police departments, officers of the Department of Transportation, selected federal law enforcement agencies, and a select few other criminal justice agencies. Linkages currently are under development with the Judicial Department and the Department of Corrections, as well as the Emergency Management Division, Department of Public Defense. Additional linkages are possible, and should be pursued, with remaining federal judiciary offices

Background (continued)

law enforcement agencies, federal judiciary offices, United States Attorney offices, Iowa Department of Justice, county attorneys, judicial district departments of correctional services, and additional municipal law enforcement departments. No specific project is proposed to establish or support these linkages. Criminal justice agencies who currently are not subscribers may subscribe now simply by contacting the Department of Public Safety and arranging a connection and service.

3. With the increased capacity of the network backbone, it now should be possible to begin moving to a graphical interface for all the existing databases, using HTML coding and web server interfaces at the server locations, and web browser applications at user locations. Transition to a world wide web interface for applications on the IOWA System and associated networks will ease training associated with current database interfaces and make all the database applications on the network more user friendly. Project 4, the data warehouse, proceeds in this direction by proposing, inter alia, creation of a central data warehouse that would include world wide web interfacing for those agencies and users desiring a graphical interface. Creation of the data warehouse will require agreement among participating database owners on some system for linking records pertaining to common persons, events or cases. Project 3 addresses this requirement by proposing creation of a data standardization committee to oversee record linkage and commonality.

4. With the establishment of a robust fixed network linking at least one public safety dispatch agency in every county in Iowa, it now is appropriate and possible to begin implementing a mobile data transmission capability that will provide mobile public safety officers and agencies data sharing capabilities comparable to those enjoyed at the dispatch centers. The following initiatives are necessary, and generally ongoing, in an effort to create the mobile data capability for Iowa's public safety community:

   a. Applications will be necessary for use on the mobile computing platforms placed in public safety vehicles and on the person of public safety officers. Applications have been developed already, or are under development, in the following areas: motor vehicle crash reports (prepared by peace officers), OWI implied consent processing, motor carrier safety enforcement, and electronic traffic citation issuance. Additional applications are needed in the areas of incident based reporting and arrest reports and emergency medical response reporting, among others. Project 2 includes as a component the integration of these applications, along with IOWA System access and web browser technology, in a usable user interface for mobile public safety users.

Background *(continued)*

b.   An integrated system is necessary for producing and sharing geographic positioning system (GPS) data from mobile units, using a common geographic information system (GIS). For example, a public safety dispatch point should be able to visually determine at any time the location of all police, fire, and ambulance units operating in its jurisdiction, regardless of who the employing entity of a particular mobile unit may be. It should be possible for such information to be accessed and displayed also by any mobile subscriber upon demand. Preliminary testing currently is underway with global positioning technology in some law enforcement departments. Project 2 includes as a component the development of a prototype common user GPS and GIS system for use by Iowa public safety entities.

c.   Workable hardware systems must be developed for mobile public safety data applications in Iowa, including mobile computers, acceptable screens, human input devices, vehicle and component interfaces, and printers. The capability to use the system from outside the vehicle may be required for some applications or users. Little development of mobile hardware has occurred to date in Iowa, principally based on reliance on the ALERT project underway by the United States Department of Transportation (DOT) in Texas. State of the art mobile hardware systems must be prototyped in Iowa, in conjunction with other components of the mobile data solution, in order to field a usable system within the near term. Project 2 proposes procuring an ALERT vehicle, and also procuring additional U.S. DOT support for hardware fielding in Iowa.

d.   Cost effective, reliable means must exist to transport data in a mobile environment, from fixed radio frequency (RF) sites to the mobile subscribers. The systems available for mobile data transmission must offer seamless connectivity to subscribers, such that any public safety subscriber may communicate to and from any portion of the public safety data system to which he or she is authorized access. Similarly, any public safety subscriber must be able to exchange electronic mail or files with any other subscriber, regardless of the identity of their mobile data carrier. Some departments may elect to purchase and operate their own mobile data infrastructure, using their existing end point on the IOWA System as the entry point to the wide area network. Other departments may elect to lease capacity from one or more commercial data carriers, such as cellular telephone companies, commercial radio service providers, commercial satellite communications providers, or personal communications service providers. Possible mobile data service providers already have been approached by the Department of Public Safety and offered the

Background *(continued)*

opportunity to work cooperatively to test and refine their capabilities, including the opportunity to establish fixed line links to the wide area network to provide a seamless interface for public safety users.

The goal is to provide multiple mobile data subscription opportunities to Iowa's public safety community within the next 12 to 18 months. Project 2 includes the opportunity for interested mobile data service providers to participate in the project by providing mobile data service in a true working environment as part of the test.

Project Overview

Project 1: Automated Booking System Pilot

One long term goal of the integrated criminal justice system is automation of the booking process at the local level, at each location where arrestees are processed into a jail or detention center. An automated booking system would include the capability to electronically capture fingerprint and photographic information regarding the arrestee, immediately transfer that information to a local database as well as a central database maintained by the Department of Public Safety in Des Moines by way of the IOWA System/WAN.

Upon arrival at the Department of Public Safety database, the fingerprint information would be immediately compared with fingerprint files resident on the Automated Fingerprint Identification System to verify the arrestee's identity. In addition, the automated booking system could generate, with the input of the arresting officer, an arrest report and incident-based reporting (IBR) data for immediate capture in the database of the arresting officer's department and subsequent batch reporting to the Department of Public Safety for purposes of the annual Uniform Crime Report and the computer criminal history database (CCH).

It is envisioned that two or three pilot sites would be established, using the existing IOWA System frame relay and fiber-optic linkage to provide 24 hour per day connectivity to the Department of Public Safety's facilities in Des Moines. Once the system has been successfully implemented at the pilot sites, it would be ready for rapid expansion to any other site linked to the IOWA System by the upgraded frame relay and fiber-optic lines.

The existing IOWA System provides an adequate transmission backbone for the test. Some interfacing may be required at the central repository and AFIS site in Des Moines.

Project Overview *(continued)*

Project #1 Automated Booking System Pilot	Qty	Unit Cost	Total Cost
AFIS Live Scan Equipment			
Live Scan Station	4	$61,505	$246,020
Mug shot Upgrade	4	$12,000	$48,000
Remote Communications Package	4	$10,000	$40,000
Telecommunications Equipment			
ICN Digital Circuit - Installation	4	$350	$1,400
ICN Digital Circuit - Monthly Charge	4	$75	$300
Router/DSU Purchase	4	$3,200	$12,800
Router 2nd year Maintenance	4	$285	$1,140
Store and Forward Electronic Mail Hub	1	$46,000	$46,000
Server Software	1	$750	$750
Miscellaneous	1	$3,500	$3,500
			$400,000

Project 2: Mobile Data

Reliable, seamless mobile data sharing and transmission capabilities for Iowa's public safety community would be the focus of a project, designed to implement and integrate in one setting the various mobile data initiatives currently underway in Iowa. This project would be conducted in at least one integrated urban-rural public safety service area in Iowa, involving participating agencies at each level of government (federal, state, county, city) and each interested public safety service provider (police, fire, EMS, EMD).

Response vehicles would be selected in each entity and equipped with mobile computing, geographic position, data transmission equipment and software necessary to conduct testing of all existing software applications including GPS/GIS. Public safety dispatch centers in the service area would be equipped with GPS/GIS to test the dispatch capabilities of the GPS/GIS interface. Participation would be required from all or most of the following entities:

- Public safety service providers
- Public safety dispatch points
- Department of Public Safety (Data Services Bureau; Field Services Bureau)
- Mobile data carriers
- Iowa Department of Transportation (Office of Driver Services)
- U.S. Department of Transportation (ALERT vehicle; equipment subsidies)
- Other commercial vendors as needed for software and hardware integration

Several software applications already have been developed by the Department of Transportation and are available to user agencies at no cost. The current IOWA System data interface is available to local departments through the current vendor. Some system integration assistance may be required to integrate all the various software applications on a common hardware platform. Considerable development will be necessary for the GPS/GIS common interface, for which little development has occurred beyond use of GPS for data input into local applications such as the mobile accident reporting system.

Project Overview *(continued)*

Potential funding sources for this project include the Department of Justice COPS More program and the Department of Transportation for highway safety and traffic system purposes.

Project #2 Mobile Data Estimated Costs

Project #2 Mobile Data	Qty	Unit Cost	Total Cost
Laptop computers with PCMCIA slots	10	$7,000	$70,000
PC software	10	$1,200	$12,000
Magnetic Card/Bar Code readers	10	$450	$4,500
GPS	10	$700	$7,000
GIS Conversion System	10	$325	$3,250
Mobile radio modem	10	$550	$5,500
Cellular phones/radios	10	$550	$5,500
Vehicle Mounting Kit For Laptop	10	$125	$1,250
Telecommunications Equipment			
RF Carrier Monthly Charge Per User (Est.)	10	$150	$1,500
Mobile Software	10	$2,000	$20,000
Mobile WEB Server	1	$35,000	$35,000
GPS	1	$125,000	$125,000
GIS Conversion System	1	$75,000	$75,000
Access Server	1	$44,000	$44,000
Travel	1	$5,000	$5,000
Contracted software development	1	$50,000	$50,000
Miscellaneous	1	$3,500	$3,500
			$468,000

Project 3: Data Standardization/Data Modeling

Project 3 proposes creation of a data standardization committee to design standards for linking records pertaining to common persons, events or cases. This may require agreement on standard data fields, one standard linking field, and file exchange formats. Data standardization is not intended to impact the initiative or flexibility of individual departments. Rather, it is envisioned only to the extent necessary to establish interoperability and data linkage and sharing based on articulable operational needs. It is envisioned that a continuing committee would be formed from data services representatives of the various public safety and criminal justice community users of the wide area network, which would exist as a permanent entity for this purpose.

Project #3 Data Standardization/Data Modeling	Hours	Unit Cost	Total Cost
Consultant Fee for Data Modeling, Data Warehouse Design, Front End Tool Selection	320	$200	$64,000

Project Overview *(continued)*

Project 4: Data Warehouse

This project contemplates developing and testing world wide web hardware and software for a proposed secure *Intranet* web server for the criminal justice and public safety community. Access to this secure web server will be made available to authorized criminal justice and public safety agencies. The secure web server is expected to be operational for an initial set of law enforcement-specific applications during state fiscal year 98. It is expected that federal grant funding through the High Intensity Drug Trafficking Area (HIDTA) will support the initial implementation.

Once the web server is available, this project would proceed to development of a central data warehouse for public safety and criminal justice community access. Every participating agency would have the opportunity to make information available and access appropriate information currently maintained by other participants. Simply for the sake of example, the following kinds of information are possible inclusions in the system:

> Gang Information
> Criminal Intelligence Reports and Summaries
> Training Calendars and Seminars
> Drug Trafficking Information
> Corrections Discharge Information
> Parole Status of Offenders
> Criminal History Information
> Judicial Scheduling
> Access to the Iowa Code
> Policy Manuals
> Interface Specifications
> Others

The concept of a central warehouse of information could be further expanded throughout this community by installing remote warehouse servers called "data marts". Information directly related to the business operation of the entity can be located closer to the user, however, the information would be maintained and supplied by the central warehouse. Only the data necessary to support an entity's customers would be accessible, thereby insuring the security of the remainder of the data. As an example, someone might need to view data regarding an arrest, but have no need to view parole information.

Criminal Justice Data Warehouse Network
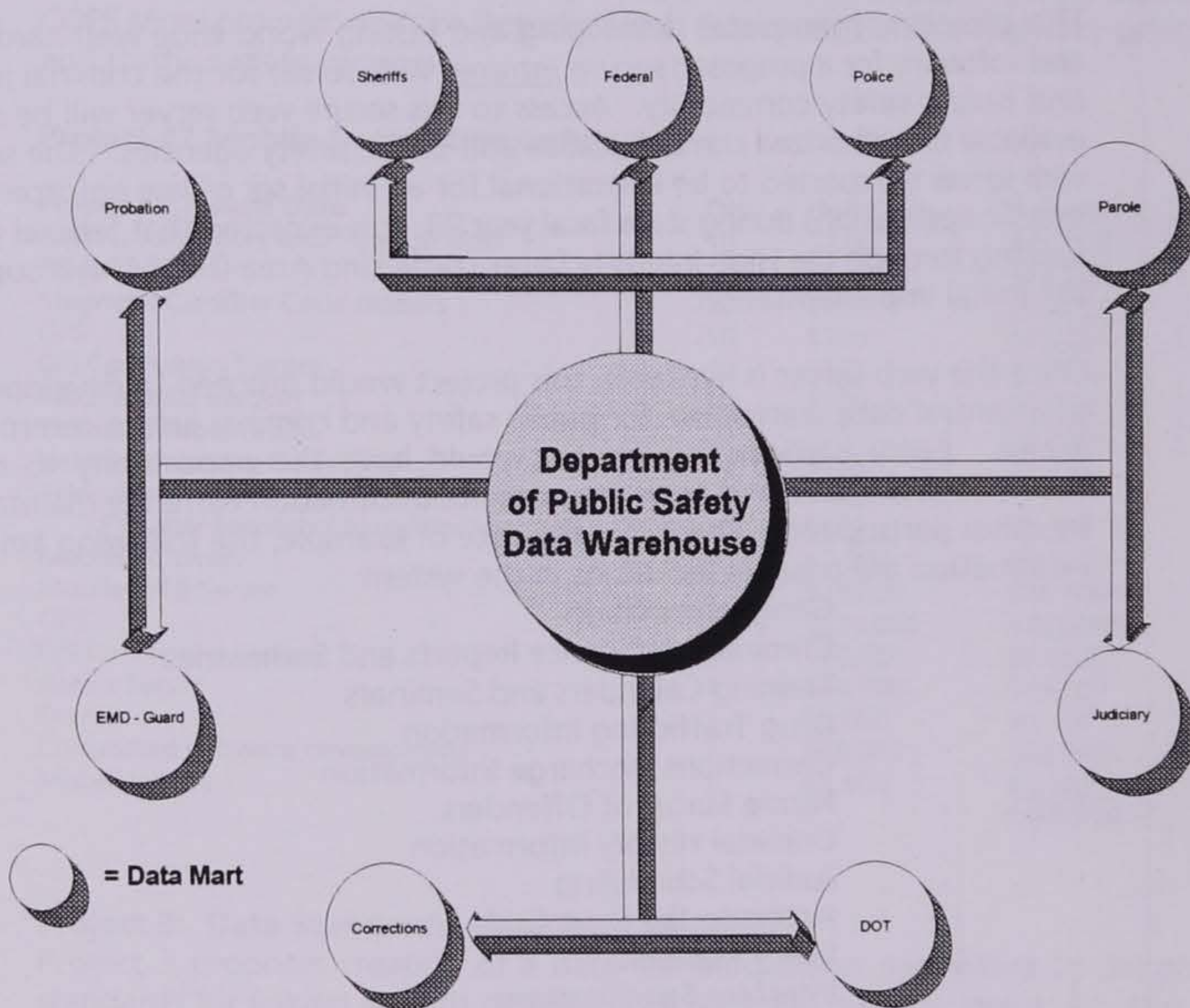
Project #4 Data Warehouse	Qty	Unit Cost	Total Cost
Data Warehouse Server	1	$325,000	$325,000
Oracle Data Base	1	$125,000	$125,000
Training	1	$25,000	$25,000
			$475,000

Project Overview *(continued)*

Steps to complete the project:
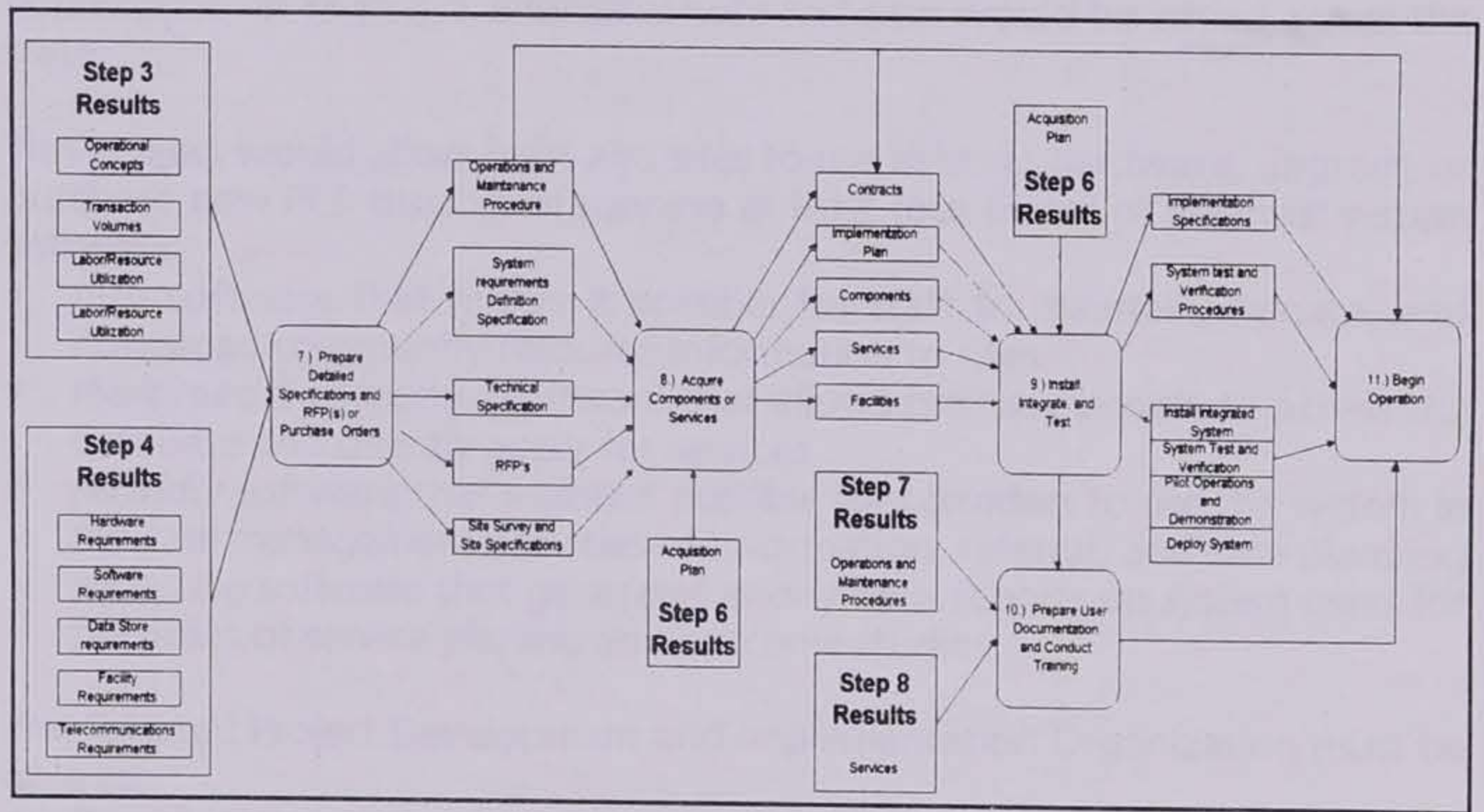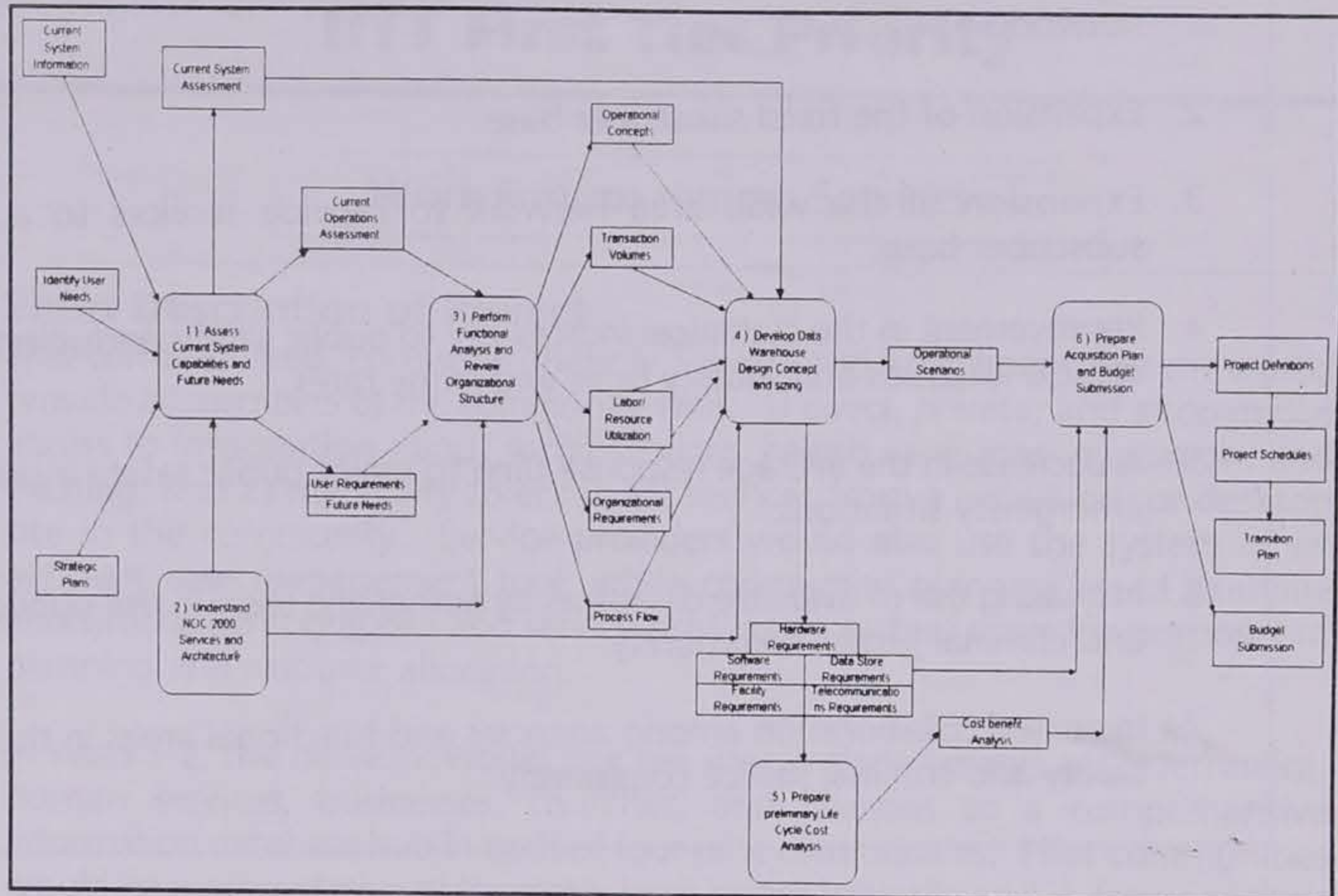
Benchmarks

1. Expansion of the sources and types of data available over the wide area network.

2. Expansion of the fixed subscriber base.

3. Expansion of the wide area network to provide services to a mobile subscriber base.

4. Improvement in the statistical indices key to public safety, including motor vehicle fatalities and fatality rates and crime rates.

5. A decrease in the average response time to major public safety incidents or emergency situations.

6. Increasing use of available databases by authorized users in the public safety and criminal justice community.

7. Increased collaboration among agencies and functional areas in the public safety and criminal justice community.

Statewide Service Information & Enrollment System
IITT First Tier Priority

Short Description of Project

This computerized, consumer-friendly Service and Enrollment System would provide all members of the community with: 1) direct, private, and anonymous access to information about social services, health care, jobs, education, and training; and 2) the ability to enroll for services from a local kiosk or desktop site in the community. Service providers would also use the system as an efficient case management tool, while community planners could examine anonymous demographics and service profiles on system users for purposes of planning and resource allocation.

In Years 1-2, the network would link ten sites in departments of government, human services, businesses, churches, and libraries to a comprehensive information database hub in each of four pilot communities. Pilot communities would be representative of the state, both geographically and in terms of their populations. In Years 3-5, additional hubs and sites would be added across the state.

This project would allow hubs and sites to use existing hardware, upgrade or purchase new PCS capable of running at least four pieces of essential system software:

- *hub* software that makes it possible for staff to maintain, update, and download community resource information to sites
- *multimedia consumer* software that allows ordinary people to access the database and directly apply for services
- *provider* software that makes it possible for providers to use the system in the case management activities of information, referral, and case planning
- *reporting* software that generates anonymous reports on system users for purposes of service planing and outcome studies.

The Selected Project Development and Implementation Organization must be able to:

- Provide the necessary software
- Direct and deploy the network in Years 1-2
- Provide long-term technical support and software upgrades
- Develop the initial statewide database.

Short Description of Project *(continued)*

Project funds could be used to: 1) fund hardware costs for the four pilot hubs and 40 sites; and 2) support the activities of the Project Development and Implementation Organization. The long-term cost of maintaining this network will be underwritten by monthly network subscription fees received from both original and replicated sites across the state.

This project involves participation of:

❑ federal government
✓ state government
✓ local government
✓ private sector

This project impacts the following IITT Plan work groups:

✓ criminal justice & public safety
❑ general government
❑ human services
❑ electronic commerce
❑ geographic information services

This project is:

✓ a new project
❑ an expansion of an existing project

Benefits to Iowans

Iowa Citizens. Families would be empowered by having a local neighborhood site from which to access an easy-to-use resource system they could use regardless of age, educational background, or native language. By having consumers complete and submit their own service applications, they are encouraged to practice self-sufficiency skills and take an active role in solving their own problems.

Human service providers and corporate human resource personnel. This system will enhance service delivery by automating information, referral, and intake processes. *Counselors and staff* would have quick access to accurate, up-to-date resource information, the ability to help people set up appointments, and the ability to more efficiently process consumers' applications. While the system might not eliminate face-to-face contact for purposes of enrollment, it would make that meeting more productive for both agency/company and consumer.

Benefits to Iowans *(continued)*

Professional information and referral agencies. The Information and Enrollment system would help professional I&Rs more efficiently maintain and disseminate records on thousands of human services, community organizations, and support groups. Common software would enable them to share their databases electronically and to create a statewide database.

State and local human service planners. Anonymous reports from the central hubs and provider/consumer sites will provide state and local planners with important information about system users: who they are, what they need, and the number and quality of the different services they are accessing. This system would also create an important feedback loop to help service programs document their outcomes.

Project Participation *(continued)*

Entity	Role
Regional Database Hubs (e.g. I&R in Cedar Rapids, Marshalltown, Northeast Iowa, Southeast Iowa).	Gather and maintain database; distribute data to network sites and receive changes submitted by agencies; install, train, and provide technical assistance to new hubs and sites in Years 3-5, market subscriptions to community; generate reports and help evaluate them.
Public-Access Sites (e.g. Family Resource Centers, schools, libraries, WIC sites, Cedar Rapids Gazette, housing projects)	Assist consumers; maintain own hardware; promote network expansion; update own program information; access system for case management purposes; help evaluate system.
State and local agencies (e.g. DHS, schools, Depts. of Ed/Public Health/DES/Juvenile Court, Corrections)	Serve as public access site; utilize planning data from regional and state-wide demographic reports.
State-wide Database	Review and consolidate regional hub info; add and maintain state-wide services; upload/download updates to hubs; produce state-wide demographic usage reports.

Project Participation *(continued)*

Entity	Role
Project Direction/Implementation Organization	Develop/maintain software; coordinate all phases of project implementation; supervises kiosk development; install/train pilot hubs and sites in Years 1-2; provide ongoing tech support
Evaluator	Develop research questions; work with Project Direction, Oversight Committees and regional hubs to measure progress toward identified outcomes and benchmarks. Prepare bi-annual summaries of results.

Entity	Role
Oversight Committees	Volunteers from each region will serve on a local oversight committee to assist with project implementation. A representative from each regional committee will serve on the state-wide group.

Project Detail

<u>Year 1: Initial Launching of 4 Regional Hubs</u>

1) Month 1-2: Establish regional hubs and hub oversight committees.
   Responsible: Selected project Direction/Implementation Organization (Project Director)
2) Month 2-3: Determine pilot public access sites in each regional area.
   Responsible: Hub Oversight Committees and Project Director.
3) Month 1-3: Acquire or enhance hub hardware.
   Responsible: Hub Directors.
4) Month 2-3: Install hub software and train staff.
   Responsible: Selected Project Direction/Implementation Organization
5) Month 2-5: Acquire or enhance public access site hardware.
   Responsible: Hub and Site Directors
6) Month 3-11: Convert/build community database at regional hubs.
   Responsible: Hub site staff.
7) Month 4-12: Network development, additional software development, collaborative linkages.
   Responsible: Selected Project Direct/Implementation Organization.
   Marking plan. *Responsible:* Oversight Committees.

Project Detail *(continued)*

Year 2: Site Deployment and Evaluation of Pilot Sites
8) Month 11-12: Ready sites for deployment: hardware, phone lines, etc.
   Responsible: Selected project Direction/Implementation Organization and Site Directors
9) Month 13-15: Install and train 40 sites.
   Responsible: Selected Project Direction/Implementation Organization Organization. Replication Plan.
   Responsible: Oversight Committees.
10) Month 21-24: Conduct evaluation for 1st report.
   Responsible: Selected Evaluator.

Years 3-5: Replication Across the State
11) Years 3-5: Replication at additional hubs and sites across the state; evaluation; ongoing system maintenance and upgrading; problem-resolutions; training and technical support.
   Responsible: Hub staff, Oversight Committees, Selected Project Direction/Implementation Organization.

Linkages with Current Programs/Projects
The Information and Enrollment system will make early efforts to link with a number of technological projects in various stages of development. We recognize that given the collaborative, interdisciplinary, and technical nature of this proposal, we would be able to look to state and federal leadership for further help in identifying issues related to protocols, safeguards, and general system issues. Legislative opportunities, such as the recently enacted Innovation Zones, will also provide key communities with the ability to technologically link the planning and creative delivery of services.

Pilot communities would be representative of the state both geographically and from the point of view of population. If Linn County were chosen as a pilot community, for example, the system would link with the Foresight 2020 collaborative that brings together community planning and implementation through eight Key Performance Areas. This "collaborative of collaborative" has pulled together businesses, organizations, and interest groups to divert duplication at initial planning stages and laid out a road map to a sustainable future (e.g. Family Resource Development Association, Community Partnership for the Protection of Children, county and city government, health care providers, area colleges, workforce centers, and nonprofit and neighborhood organizations). Other projects that would be linked to the new system include service learning sites, county and city services delivery, and I-LINK.

Similar efforts are now underway in other parts of the state, such as the Marshall County Youth and Violence Committee in Marshalltown, that pulls together law enforcement, human services, government agencies and education for the purpose of reducing juvenile crime and violence.

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Project Detail *(continued)*

In general, communities that have experience with such collaborative would be ideal for launching this innovative and consumer-friendly Information and Enrollment System.

<u>Oversight</u>
Regional Committees in Each Hub Area: Consists of representative from the hub, public and nonprofit agencies, churches, schools, and corporations. Determines the 10 test sites, promotes the network over time, problem-solves and evaluates the network at the community level. Becomes critical mentor to new communities who sign on to the system in late years of the project.

State-wide Oversight Committee: Composed of one representative from each regional committee, the Project Direction Organization, regional staff managers, a State Human Services Workgroup member, and a technical expert. Advisory role involves monitoring the expansion of system sites, analyzing system usage data at the state level and feeding that data back into state and local planning efforts.

<u>Management</u>
Hands-on management will be administered by the staff at each hub, the Selected Project Direction and Implementation Organization, the technical advisors that might be needed. As the number of hubs grows, so would the number of persons involved in the system management group. In Years 1 and 2, the Project Director will coordinate the deployment of the system, serving as a linkage between the hub staff, software developers, training and installation personnel, and technical advisors.

Project Analysis

Project Direction/Coordination	$120,000
1FTE, 2 years	
Project Deployment	$70,000
Installation, trg, travel, tech support	
Software Development	$150,000
Database Building (4 Hubs)	$77,000*
Database Building (State-wide)	$6,000
Hub Hardware (4)	$20,000**
Site Hardware (40)	$160,000**
Site Kiosks (40)	$80,000
Kiosk Development	$14,500
Evaluation	$40,000
Total	*$737,500*

Project Analysis *(continued)*

*Area information and referral agencies as well as county and city systems may already have in place a core database that needs some enhancement. Hubs may also be able to contribute differing amounts of in-kind labor.

**Cost will vary depending on what hardware is needed at pilot hubs and sites. Figures are projected for entirely new systems.

Projected Long-Term Costs

Once the network is deployed in the four pilot communities in Year 2, the system will begin to generate subscription revenues that will underwrite the ongoing work of the database hubs. It will be the responsibility of each hub and site to maintain its own project hardware through its equipment and maintenance plan. Software maintenance and upgrades would be provided by the Selected Project Direction/Implementation Organization, which would receive a portion of the network's subscription revenue for this purpose. Installation and training for new hubs and sites would be undertaken by the experienced regional committees and staff.

Projected Replication Costs

In years 3-5, new hubs and sites will be replicated across the state. New *hub* set-up costs are estimated at $15,700-25,000 depending on the availability of databases and equipment.

New site set-up costs are estimated from $600 to $4,600 depending on the availability of equipment. These costs do not include a new phone hook-up, should it be needed at the hub or site, or local monthly phone charges.

During The project period, in-kind would be provided by selected regional database hubs. To the extent this project is coordinated with other technological ventures, there may be additional grant and/or foundation funding.

Subscription fees paid by sites in Year 3 and beyond will help the hubs become stable and eventually self-sufficient.

Benchmarks

An independent evaluator would work with the Service Information and Enrollment System to examine both processes and outcomes of the network.

Potential expected outcomes include the following:
- Consumers will receive current and accurate information.
- Consumers will be satisfied with the system and repeat their use.
- Over time, there will be an increase in the number of unduplicated system users.
- Consumers' intake efforts will become simpler and easier by having a single entry to multiple services.
- The system will streamline intake processes from the point of view of providers.
- Public knowledge and confidence in how to access services will increase.
- Service personnel will increasingly utilize the system for case management.
- The system will provide useful data to state, regional, and community planning efforts.

Barriers to Project

Fiscal Barriers. No single community can provide sufficient developmental dollars to launch an empowering, consumer-friendly Service Information and Enrollment system. The main barrier lies in obtaining these start-up funds.

Knowledge Barriers. People vary in their level of knowledge and understanding of how modern technology can be used to streamline and enhance service delivery.

Introducing Innovation to the General Public. Getting the general public comfortable with using the system may be an issue for local sites, although people form all walks of life are increasingly willing to use technology if it is friendly and easy to learn. The oversight committees at the local and state levels will provide useful support to the local networks as they grow.

Legal Issues. Based on experience with other collaborative efforts, we can anticipate that organizations may encounter some challenges regarding information management, confidentiality, and potential legal barriers. Innovation Zone legislation opens doors and offers a legal process by which these issues can be addressed in a partnership between state and local communities and public and private sectors.

Comprehensive Intergovernmental Data Access Facility
IITT Second Tier Priority

> **Work Group:** Human Services

Short Description of Project

Provide governmental units the foundation tools and expertise necessary to access data from multiple legacy information systems and transport it across the Iowa Communications Network.

The data access products and expertise are prerequisites for a wide range of intergovernmental projects, but the initial application will be for workforce programs. It will permit federal, state, and local entities access to data currently stored in separate legacy systems at the Iowa Department of Human Services, Iowa Workforce Development, substate regional entities, and elsewhere.

This project involves participation of:

- ✓ federal government
- ✓ state government
- ✓ local government
  (cities, counties, councils of governments, and other consortia of counties, and community colleges)
- ✓ private sector

This project impacts the following IITT Plan work groups:

- ✓ criminal Justice & Public Safety
- ✓ general Government
- ✓ human Services
- ✓ electronic commerce
- ✓ geographic information system

This project is:
- ✓ a new project
- ❑ an expansion of an existing project

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Benefits to Iowans

The project is forecast to impact 350,000 Iowans and over 30,000 businesses operating in the state. For customers of Workforce Development it means eliminating duplicate data collection as they receive services from various partners in the employment and training arena. For businesses it puts in place the tools needed to provide governmental entities a single view of the business and the prospect of reducing government required paperwork.

The project will provide comprehensive access to multiple legacy information systems, via a Central Data Access Facility, from a single, consistent interface, providing more, timely and better information to staff and citizens. This will also reduce duplication of data stored in multiple locations, provide better control for accuracy of the data, improve the timeliness of services, and provide a more useful data resource for policy analysis and decision making for any organization that pursues applications using data from multiple legacy systems. Finally, it provides a migration path for defragmenting data storage where appropriate in the future.

Project Participation

Iowa Workforce Development will take the lead role in developing data access capabilities for state agencies and local governments by securing the tools and initial expertise for its workforce development integrated information system. The Department of Human Services will participate actively as steward of the data for welfare recipients in the Promise Jobs program. Other state agencies including the Department of Education, Information Technology System, and others will be invited to participate in order to help build their capacity for additional inter-governmental applications as well as participation in the workforce application.

At the local level, cities, counties, councils of government, and other consortia of counties, and community colleges which are involved in the delivery of workforce development services will participate. Three substate regions will be involved to participate directly in the design of the workforce application, which will ultimately be rolled out to all parts of Iowa.

Customers will include Iowa's private businesses and public employers, students, job seekers, welfare recipients, Iowans with disabilities, schools, community-based organizations and others who will receive improved products and services from the comprehensive workforce development system.

The initial workforce project will provide governmental entities in Iowa with the tools, as well as the experience and expertise, which are necessary for any application that will involve data from multiple legacy systems. This provides virtually unlimited opportunities to other state and local governmental entities in the future.

Project Detail

Background

The existing information systems at all levels of government are composed largely of discrete databases on separate isolated computers with different platforms using different formats, and which are updated by different people at different intervals. This has precluded public servants from accessing comprehensive, timely data to serve our citizens, seriously inhibits our ability to serve them collaboratively, and does not provide us with a useful data resource for making decisions.

Recent advances in technology, however, currently present us with unlimited opportunities to combine data from multiple sources and make information available in ways that are much more useful and producing than has been possible in the past. It is now possible for workers from multiple organizations at multiple levels of government to access data form multiple legacy systems through a common interface as though the data all resides on a single system.

Benefits

Collaborative services to welfare recipients and others who are at a disadvantage in the labor market can be facilitated, rather than inhibited, by such an information system. It will permit a common intake for a variety of services, eliminating the bureaucratic run around and extra expense that currently exists in the employment and training sector. The individuals served will be given more options and opportunities to overcome barriers to employment by blending private and public agents acting on their behalf. Other benefits that are visible to the ultimate customers are limited only by our imagination.

Additional benefits include:

- Major reduction in the duplicate storage of the same data, with resulting reductions in costs.
- Opportunity to archive key data upon which to base policy decisions, using common formats and utilizing surplus storage freed up by eliminating duplication.
- Elimination of conflicting data between systems that is presently inevitable, with the result that the data available is more accurate and up to date.

What it Takes

Many elected and other public officials recognize the opportunities to reduce costs and improve services that are offered by current technology. They may also understand that it entails an investment in hardware and software to connect discrete systems with each other along with some programming to construct a common interface. These aspects are readily visible and therefore understandable without an expert's understanding of the technical issues that are less readily apparent. Unless they have undertaken a serious study of the issue, most public officials won't realize the nature of the additional data access components that are absolutely essential prerequisites to realizing the benefits they desire.

Project Detail *(continued)*

Briefly, these essential components are:

- The <u>tools</u> needed to "translate" between disparate information systems.
- The <u>expertise</u>, which does not currently exist within the pool of staff who support our legacy systems, to effectively use the tools, and
- The painstaking nuts and bolts <u>analysis</u> required to identify all the existing data elements and formats in which the data is stored, and to arrive at commonly accepted formats and procedures for updating, accessing, and protecting the confidentiality and integrity of the data.

Together, these elements permit the development of a Central Data Access Facility which is the means for "translating" and transporting data between the legacy systems and the users' desktops.

<u>Tools</u>

There are essentially three types of data access tools. The first type is data-centric (or data passing) tools. These tools are those that are primarily thought of a middleware. They are used to connect a requesting application to a target server database. In most cases, they are used to develop new applications that are to be implemented.

The most important of the data passing technologies are gateways. Gateways are used to provide connectivity to heterogeneous databases. Examples of gateway products are Information Builders' EDS/SQL, IBM's DataJoiner, and MicroDecision Ware's MDI Gateway.

The problem with these types of tools is that they are used to provide DIRECT access to target databases. In many instances, such direct access may not be desirable, politically feasible, or even legal. This leads to the second type of tools, process-centric (or process transfer) tools. These tools are also thought of as message passing tools.

These tools enable communication between application processes. Both sides agree up-front on a "contract" protocol and messages are predefined. They are typically needed when the data access scope in inter-enterprise, high-volume and has many tiers of application complexity.

Some example forms these technologies take on are Remote Procedure Calls, Messaging, Transaction Monitors, Object Request Brokers, E-mail and EDI (electronic dat interchange).

The third type of data access tool is primarily documentary. These take the form of Meta-Data catalogs. Meta-Data is essentially "data about data." As the overall data architecture grows (whether it be data-centric or process-centric), the entire architecture will be of little value if users are unable to determine what information is in the system or systems. Examples of Meta-Data catalogs are Brownstone and Rochade.

Project Detail *(continued)*

Such tools are not inexpensive, and it is therefore imperative to have a thorough understanding of what is available, to be selective in procuring the ones Iowa will use, and to leverage our investment in such tools by sharing expenses whenever possible. In order to implement the integrated information system for workforce development, IWD has undertaken a formal process of soliciting information from vendors about the tools which are available, and will award a procurement contract for the tools to be selected by the decided upon date. In order to bring as much expertise to best as possible, and also to assure that the tools selected are useful to as wide a range of governmental entities as possible, IWD has secured the participation of DHS, the Vocational Rehabilitation Division of DE, and the ITS throughout this process.

The procurement of these tools for the workforce development application affords an opportunity for other state departments as well as local governmental entities to benefit from IWD's investment to date.

Expertise

Almost by definition, public entities' current fragmented information systems preclude us from having the requisite expertise to use the tools effectively. There are two ways to obtain this expertise:

1. It can be <u>purchased</u> from private vendors. While this will certainly be necessary initially, it ultimately won't be cost effective to contract with private consultants to perform all the work for every application.

2. It can be <u>developed within</u> governmental entities.

Analysis

The detailed work of identifying all the existing data elements and formats in which the data is stored, and arriving at commonly accepted formats and procedures for updating, accessing, and protecting the confidentiality and integrity of the data will need to be conducted for each individual application involving the integration of data will need to be conducted for each individual application involving the integration of data from multiple legacy systems. While the actual work of conducting the analysis cannot be lifted from one application to the next, the knowledge of how such analyses can most efficiently be performed can be obtained from experience in one application and applied to others.

Project Analysis

Estimated cost to initiate the project is $1.1 million.

Benchmarks

12-30-96   Secure the tools and initial expertise from vendors

4-30-97   Complete first application to link legacy data with data access tools.

3-30-97   Complete roll out of common in-take statewide.

Barriers to Project

Some of the most significant barriers to implementing this type of solution involve determining what tools exist, selecting those most appropriate for building an effective Central Data Access Facility, and making the most efficient use of limited public resources, of funds and personnel, in the process. IWD, in cooperation with many other governmental entities, is currently completing a formal process to identify and select tools and vendor expertise, and its workforce development project offers the state and local governmental entities an opportunity to share costs and derive experience to optimize public resources for additional data access applications.

County Courthouse Connections to Fiber Optics
IITT Second Tier Priority

Work Group: Criminal Justice & Public Safety

Short Description of Project

- Phase 1 -- Install ICN/fiber optics connections to three major county courthouses in Iowa: Linn, Scott, and Polk, as phase I (outlined in this proposal) of a longer term initiative to connect all of Iowa's 99 county courthouses to the ICN. Each of these three initial counties has teleconferencing equipment in its jail and one or more of its courtrooms.

  Phase I could be operational and pilot projects underway by completing the three courthouse connections. These connections would provide statewide video court hearings, including federal processes; rapid criminal justice data transmissions, and emergency management response capabilities.

- Phase II -- Phases 2 and beyond would bring other county and federal courthouses onto the ICN. Phases II and beyond would connect all county courthouses (99), major federal courthouses and all state correctional facilities to the Iowa Communication Network (ICN). Other projects currently under consideration to connect county or federal courthouses would add to the value of this project.

  County Courthouses: Realizing that economically it will not be possible to install fiber optics (ICN) capabilities in all ninety-nine county courthouses at once, we propose Phase I to include ICN connections to three county courthouses: Polk, Scott, and Linn counties.

  Major Federal Courthouses: Two major federal courthouses (Des Moines and Davenport) are already connected to the ICN. The remaining two major federal courthouses (Cedar Rapids and Sioux City) need to be connected in later phases of this project or as part of other initiatives. Additional federal courthouse connections throughout the state would expand the effectiveness of this project.

  State Prisons: All of the state prisons have an ICN connection or plans are underway to connect them soon.

Short Description of Project *(continued)*

NOTE: Although counties are not now authorized users of the ICN, it may be used for "law enforcement purposes." Court procedures are state functions. State prisons are authorized users.

Connecting the courthouses to the ICN addresses the Work Group's goal of developing " telecommunication networks that support criminal justice and public safety applications, [including wireless data transfer,] with the capacity to transfer huge amounts of real time data and images quickly and easily. [This proposal will not address the bracketed statements].

To a lesser extent it address two other goals: "to develop an integrated system ensuring compatibility and useability across a wide range of applications" and "to ensure ongoing systems integrity through [accurate, current and,] secure information input and output.

This project involves participation of: ✓ federal government
✓ state government
✓ local government
✓ private sector
This project may also involve private vendors and contractors.

This project impacts the following IITT Plan work groups:
✓ criminal justice & public safety ❏ electronic commerce
✓ general government ❏ geographic information system
❏ human services

This project is: ✓ a new project
❏ an expansion of an existing project

Benefits to Iowans

Connecting all county courthouses, major federal courthouses, and state prisons will establish a criminal justice and public safety ICN "communications" grid. Currently rapid communications between emergency service agencies is inhibited by lack of compatible lines of communications for data and voice transmissions. A criminal justice and public safety grid will aid user agencies in creating and/or expanding criminal justice efforts, utilizing new technology, by ensuring real-time data, voice and video communication. Court processes could be expedited; the amount of federal, state and local government resources needed to support the courts can be reduced; and the safety of personnel, inmates and citizens can be enhanced.

At the present time hundreds of thousands of taxpayer dollars are being expended in the transportation of federal state and local prisoners to court appearances, some of which are minor in nature although they are still required for the administration of justice. Transportation can be burdensome and expensive for law enforcement agencies and a safety factor for the general public. The ability to establish video court processes in hearings could greatly reduce the amount of transportation costs and the amount of prisoner "road time." For example, during a six-month pilot project using video conferencing between Des Moines, Davenport and the state prison at Fort Madison, federal agencies in Southern Iowa (including courts, marshals, and attorneys) saved 25,298 vehicle miles, 643 driving/riding hours, 85 hotel stays and $37,108.

By using video conferencing, fewer prisoners will be transported on Iowa's highways, reducing the risk to citizens, officers and prisoners. ICN capabilities will enhance law enforcement's ability to accurately identify suspects and individuals, assure that the proper charges are being filed and timely application of justice, and free judicial time for managing of case load.

A benefit of this project would be the expansion of the ICN infrastructure to all major population centers in Iowa. This initial network could be utilized in a large number of ways to support other projects and government processes.

Project Participation

- Iowa Department of Corrections (Lead Role)
- Iowa Emergency Management Division (Participant/User)
- U.S. Marshals Service (Participant/User)
- Federal and state courts (Users)
- Federal Emergency Management Agency (FEMA) (User)
- Polk County
- Linn County
- Scott County

Project Detail

Link all major federal courthouses in Iowa to the ICN and install courtroom video conferencing equipment.
- Des Moines --connection and equipment is installed, improvements are necessary
- Davenport--connection and equipment is installed, improvements are necessary
- Cedar Rapids--installation planned and in progress
- Sioux City--include in Phase II or III

Link three county courthouses (Linn, Polk, and Scott) to the ICN and install courtroom video conferencing equipment.

- Polk County--currently has video courtroom connection between Des Moines Police Department, Polk County Courts and Polk County Jail, however, an upgrade must occur to connect to the ICN. A fiber optics line is in the planning stages to run from the Lucas State Office building to the Polk County Courthouse. This line is capable of linking the Des Moines Federal Courthouse, Des Moines Police Department, Des Moines Library (Main), Polk County Courthouse and Jail.

- Scott County--video courtroom is being utilized through a coax cable link to the Scott County Jail however an ICN link is needed to allow hearings to be conducted between the courts and prison inmates. The nearest fiber optics connection is at Fourth and Main at the Davenport City Library, three blocks from the county courthouse.

- Linn County--video courtroom is being utilized through a coax cable link between the courts and jail, however an ICN link is needed to allow hearings to be conducted between the courts and prison inmates. Fiber will be within three blocks when the federal courthouse connection is completed.

Link all Iowa state prisons to the ICN and install fiber optics class/court rooms. All state prisons are linked to the ICN or are in the process of installing fiber capabilities.

Conduct Pilot Study #1:
- Survey Court users: Determine savings of hours and distance traveled, time, expenses (e.g.,per diem). Assess ability of technology to improve administration of justice (e.g., timeliness and accessibility) and user satisfaction.
- Survey, and where necessary establish, judicial protocol for the proper use of new ICN/video court technology.
- Determine user training needs.
- Assess other potential uses, advantages and/or disadvantages.

Project Detail *(continued)*

Conduct Pilot Study #2:
- Install ICN/DPS linked automated booking station (ABS) in the three participating county jails (Phase I).
- Survey Users: Determine time and financial savings, user satisfaction, timeliness and accessibility, improved apprehension (estimated turn-around time for ABS is two hours compared to 2-4 weeks under current system).
- Survey, and where necessary establish, federal, state, local protocol of the proper use of new ICN/video court technology.
- Determine user training needs.
- Assess other potential uses/advantages/disadvantages.

Project Analysis

Projected Costs

$10,000 Installation of fiber cable to the Scott County Courthouse (coax cable is installed between courthouse and jail; courtroom video conferencing equipments in place). Nearest fiber optics connection is believed to be within 3 blocks.

$10,000 Installation of fiber cable to the Linn County Courthouse. Fiber connection may be within three blocks.

$ 10,000 Installation of fiber cable to the Polk County Courthouse (coax cable is installed between courthouse, Des Moines Police Department and jail).

$162,000 ICN Terminal Equipment, 3 @ $54,000

$189,000 ICN Classroom equipment (cameras, microphones, control panels, etc.) 3 @ $63,000

$15,000 Training and staff development costs
$25,000 Annual telecommunications costs for three participating courthouses 3 @ $700/mo. X 12 months

$421,000 Total

Note: *This project requires installation of an Automated Booking System (ABS) which is included in Project #3. If that proposal is not funded, this project budget will require an additional $230,000 for the ABS.*

Project Analysis *(continued)*

Possible Funding Sources
- GSA Emerging Technology Grant
- State and county government (prisons, furniture, etc.)
- FBI (automated booking stations)
- State Department of Public Safety (for connection to state data bases)
- Department of Justice, Office of Justice Programs (OJP), National Institute of Justice (NIJ) and/or COPS grant.
- Private funding (e.g. river boat community grants, technological beta test sites, etc.)
- State Courts and Counties (Phase II and beyond, would incorporate the need for local government expenditures)

Benchmarks
- Completion to improvements in Des Moines Federal Courthouse Annex equipment.
- Completion to improvements in Davenport Federal Courthouse equipment.
- Completion of the installation of fiber optics cable to Cedar Rapids Federal Courthouse.
- Completion of installation of fiber optics cable to the Polk County courthouse and jail.
- Completion of installation of fiber optics cable to the Scott County courthouse and jail.
- Completion of installation of fiber optics cable to the Linn County courthouse and jail.
- Completion of user training.
- Development of survey instrument.
- Completion of data collection.
- Submission of final survey report.
- Installation of Automated Booking Stations in the Linn, Polk, and Scott county jails.
- Establishment (if and where necessary), federal, state, local protocol of the proper use of new ICN/video court technology.
- Assess other potential uses/advantages/disadvantages.

Barriers to Project
- Significant funding is required.
- Lack of a detailed plan to bring on all 99 counties.
- Training, willingness of key people to use teleconferencing technology.
- ABS requires cooperation of federal agency. State's low (by comparison) level of crime may prevent installation of ABS in Iowa.
- Legislation prohibiting counties from being full participants in ICN technology.

Electronic Transfers of Client & Case Information
IITT Second Tier Priority

Work Group: Human Services

Short Description of Project

The goal of the exchange of information via electronic means is to provide an improved method to communicate client and case information to create more efficiencies in service delivery. Efficiencies include more timely exchange of information to facilitate initiation or adjustments to service delivery; reduction in duplication of efforts involved in gathering information from individuals and families by multiple agencies; and a reduction in paperwork and other administrative burdens.

The project would include the Departments of Human Services and Education, the Juvenile Court system, the school system, and private human service providers. Examples of information that could be shared in client demographic information, service eligibility and participation information, case treatment plans, court orders, and progress reports.

This project involves participation of:
- ❏ federal government
- ✓ state government
- ✓ local government
- ✓ private sector

This project impacts the following IITT Plan work Groups:
- ✓ criminal justice & public safety
- ✓ general government
- ✓ human services
- ❏ electronic commerce
- ❏ geographic information system

This project is:
- ❏ a new project
- ✓ an expansion of an existing project
  The capacity to communicate via electronic mail currently exists in many areas of the public and private sector. This project will build upon and expand that capacity.

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Benefits to Iowans

The benefits to the citizens of Iowa would result in the following:

- More timely and accurate sharing of critical client information.

- A streamlined process supported by technology to reduce cumbersome mailings, length of time required to prepare copies, postage costs, staff costs, and mailing time.

- Reduce costs associated with duplication of efforts involved in gathering, and disseminating common information.

Project Participation

The Department of Human Services, Department of Education, the local school system, the Judicial Department, and the private human service provider system shall participate in the project, with leadership assumed jointly by the Department of Human Services and the Judicial Department.

Education, the schools, and providers, are critical participants. Their role shall be to work with DHS and the courts to design and implement a pilot project involving individuals or entities from within various levels of their organizations.

Coordination and communication with the ICN is necessary.

Project Detail

Iowans needs are often served by a combination of entities, at a variety of locations. Coordination of the service to these individual and families has traditionally been subject to the best communication tools available. Technology has radically improved communication tools. Government, public, and private entities are becoming increasingly more "automate." They record information and produce documents within automated data information systems which can be shared from desktop to desktop, via electronic means.

Currently service workers, providers, juvenile court staff, county attorneys, AEAs, and local schools share information on a regular basis through photocopying and mailing documents containing demographics, historical service information, case plans, assessments, court reports, progress reports, applications for petitions, abuse reports, and evaluations. This proposal will, in two phases, replace copying and mailing with electronic transfer of this information, and employ the ICN and Internet tools to share information on clients who are served in common by DHS, the Courts, the schools, and the private and not-for-profit providers.

A project which is ready to begin pilot implementation involves DHS and human service providers in an electric exchange of information to facilitate provider invoicing for service delivered to DHS clients. Providers dial into the DHS Network and file transfer invoice information to DHS. DHS uploads the file into the Family and Children's Services Information System (FACS) mainframe system to process the invoices and make payment. Phase 2 of the Electronic Invoicing project will include the ability for providers to access information about the line items on the submitted invoices status. This e-mail proposal expands on electronic sharing of business and client information between providers and DHS.

Within DHS, a WAN allows DHS to electronically share information among staff at all DHS locations statewide. All DHS service workers have desktop PCS, use the FACS mainframe system, and have connectivity to the Network. Service workers record client information, monitor service and treatment, and create case plans and reports within this environment.

As networking capabilities and types of information that can be shared is identified, it is anticipated that some information and documents may lend themselves more readily to electronic transfer. Some documents may not be currently produced or available as data files. In order to fully share information electronically, scanning will be necessary. It may be desirable to begin by transmitting only those selected documents or sets of information; however, the benefits may not be fully realized.

Project Plan, Management, and Oversight
A. Select project leaders (DHS and Judicial). Project leaders shall report progress to the IITT
B. Establish a project team from DHS, Judicial, Education, schools, and providers.

Project Detail *(continued)*
C. Study feasibility
D. Develop work plan, time lines, and budget.
E. Make recommendations to IITT.
F. Implementation.

Project Analysis
Costs to each agency will vary depending upon the current level of automation. Costs may be incurred for PCS, connective wiring, modems, scanners, software, Internet provider fees, and installation costs. Staff time costs associated with the project include data management staff time to maintain and support the network systems, and training for users.

Benchmarks

Expected Outcomes
- Communications critical to human service delivery will be streamlined and more timely through the use of electronic transmission of client and case information.

- Provides the ability for rapid transfer of emergency and critical information on clients to and from DHS, providers, the schools, and the courts.

- More information is available to agencies without duplicating efforts to gather the information from clients, their families, or others.

- Documents and information sent and/or stored in data files will reduce paper.

Measures
- Customer satisfaction surveys: ease of use, timeliness, and degree of utilization

- Cost comparisons: paper, copying, and postage.

Barriers to Project

- Concerns about protecting the confidentiality of data must be addressed.
- Varying levels of automation exist among participants.
- Software may not be compatible.

Emergency Management Transmissions
IITT Second Tier Priority

Work Group: Criminal Justice & Public Safety

Short Description of Project

This project provides a mobile video and audio interactive transmission capability to state & federal emergency management and law enforcement agencies. The project provides real time interactive video transmission capability from emergency law enforcement related incidents to State Emergency Operations Center (EOC), the Federal U.S. Marshals Service districts, and other federal operating locations (i.e. Washington D.C.). The real time video transmission capability is critical for immediate response by chief decision makers in emergency and critical situations.

This project involves participation of:
- ❑ federal government
- ✓ state government
- ✓ local government
- ✓ private sector

This project impacts the following IITT Plan work Groups:
- ✓ criminal justice & public safety
- ❑ electronic commerce
- ✓ general government
- ❑ geographic information system
- ✓ human services

This project is:
- ✓ A new project
- ❑ An expansion of an existing project

Benefits to Iowans

Provide increased information, both video and data to emergency managers, emergency responders and law enforcement agencies. Will lead to better decision making by managers in regards to the appropriation and relocation of resources. Full implementation will allow for an increased ability to ensure that public health and safety needs are met, thus allowing for greater protection of life and property of Iowans.

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Project Participation

Lead: Iowa Department of Public Defense. (Includes Emergency Management Division and Iowa National Guard)

Co-Leads: Iowa National Guard/Emergency Management Division. Emergency Management Division will coordinate 28E agreements with appropriate agencies involved in the partnership.

Department of Justice: utilization for link back to DOJ headquarters in Washington D.C., U.S. Marshals Service, FBI, ATF. Utilization of established Des Moines to D.C. circuit.

Department of Public Safety.

Iowa Communications Network.

Local law enforcement agencies.

U.S. Department of Defense - National Guard Bureau.

General Service Administration should be kept informed.

Citizens of Iowa and using agencies are considered the customers.

Service providers would be ICN, IDPD & DOS.

All state agencies with emergency response responsibilities.

Project Detail

- Develop implementation plan & 28E cooperative agreements.
- Purchase mobile satellite video voice data transceiver/receiver.
- Develop manning model for maintenance of equipment.
- Managed by the Department of Public Defense:
  Coordinate usage through EMD and National Guard.
  Work with other federal agencies to coordinate downlinks via ICN to state and federal headquarters.
  Would link with the ICN to take satellite feed to end users.
  Would be available via the ICN to route emergency data back to local (county) emergency management centers.

Project Detail *(continued)*

Time Frame

1 month:	Implementation Plan Design Development
3 months:	Hardware Procurement
6 months:	Personnel Recruited & Trained (concurrent)
2 months:	28 E Agreement Execution 2 (concurrent)
1 month:	Maintenance Plan Development
8months:	Estimate 8 months for project implementation.

Project Analysis

Hard Cost:

Satellite transmission vehicle:	$300,000
Receiving station at STARC Armory (Steerable KU dish)	$ 20,000
2 full time operators/technicians (to provide support annually)	$ 85,000
Satellite subscription fee (on demand) 24 hour availability	$ 38,000
Training expenses - start up (minimal annual costs)	$ 15,000
System maintenance costs	$ 20,000
TOTAL EXPENSES:	**$478,000**

Benchmarks

- Success will be measured through evaluation of performance by the agencies utilizing the system.

- Will be benchmarked against historical data on emergency response and civil disturbance/criminal activity.

- Expected outcomes: Increased and enhanced coordination of agencies involved in an incident. Provision of more timely and appropriate response of agencies. This project could serve as a prototype for other states to develop similar capability.

Barriers to Project
Joint funding streams - coordinated by Public Defense Comptroller.

Virtual Service Counter
IITT Second Tier Priority

Work Group: Electronic Commerce

Short Description of Project

This project creates a remote, interactive, virtual service counter for government transactions and creates a front-end interface that will allow for delivery of government transactions at multiple locations (regardless of transaction origination). These locations may be fully automated or staffed.

The purpose of this project is to develop electronic linkage between Workforce Development Centers, University and Community College Financial Aid Departments, State and County Veterans Affairs Offices, and the Department of Veterans Affairs. Electronic linkages would include access to a Department of Veterans Affairs home page that would permit on-line application for various VA benefits.

This project involves participation of:
✓ federal government
✓ state government
✓ local government
❑ private sector

This project impacts the following IITT Plan work groups:
❑ criminal justice & public safety
✓ general government
✓ human services
✓ electronic commerce
❑ geographic information system

This project is:
✓ a new project
❑ an expansion of an existing project

Benefits to Iowans

Many veterans and veterans with disabilities have immediate needs for services offered by the Department of Veterans Affairs. These needs include needs for financial assistance such as disability and pension payments, need for educational assistance, and need for vocational rehabilitation assistance for veterans with service-related disabilities. Presently much of this commerce is conducted by mail or by visits which involve travel to the VA Regional Office in Des Moines, Iowa. There is also some telephone commerce however most of that commerce involves follow-up of inquiries rather than on-line application for benefits and assistance.

This project would involve the on-line application for benefits, as well as electronic communication among the various government and educational facilities.

Improving communication would result in improved service to Iowa's veterans by reducing processing time, increasing access and consequently increasing the amount of benefits delivered to Iowa veterans.

Project Participation

1. Workforce Development Centers
2. U.S. Department of Veterans Affairs
3. VA Medical Centers
4. Iowa Community Colleges
5. Iowa Universities
6. Iowa Veterans
7. Iowa Department of Veterans Affairs
8. Iowa County Departments of Veterans Affairs Offices

Project Detail
The components of this project include:

1. The ability to access information from the Department of Veterans Affairs through the use of a web site.
2. The ability to initiate the automated processing of claims by the customer through the use of a web site.
3. The ability to communicate electronically among the Department of Veterans Affairs, Workforce Development Centers, educational institutions, and State and County Department of Veterans Affairs offices.
4. The ability to electronically share data including the creation of electronic systems that will interpret data from various sources.

Project Detail *(continued)*

The Department of Veterans Affairs, Veterans Benefits Administration provides education benefits, disability benefits, VA pension benefits, survivors benefits, and vocational rehabilitation benefits, to over 100,000 veterans in Iowa. With the exception of satellite offices for vocational rehabilitation, all other benefit services are provided directly at the VA Regional Office. Consequently, veterans must phone, write, or personally appear to apply for benefits and resolve benefit concerns. Initiating applications currently requires hand processing to enter data into VA computer systems. The central location results in inconvenience for veterans residing outside of the City of Des Moines and probably results in reduced numbers of veterans receiving benefits to which they are otherwise entitled.

Hand entry of data into computer systems results in delays and potential inaccuracies.

The initial phase of this project will address the Vocational Rehabilitation Program. This program is relatively small, however the processing structure is similar to larger components

This allows for easy management of start up problems and will allow for smoother transition when larger program components are added.

This proposal calls for the application of technology that currently exists to improve both access and timeliness to benefits. The proposal is sustainable from the Department of Veterans Affairs standpoint and usage can be expected to increase with the increase presence of computers in individual residences.

The proposal will offer concrete benefits to the state as any increase in benefits received by veterans means increases in federal dollars that are brought to and spend in Iowa.

Highlights of the Project

1. Intergovernmental
2. Low cost and sustainable
3. Expandable
4. Direct benefit to citizens of Iowa
5. Initial phases easily manageable
6. Will produce increased income to the State of Iowa
7. Clear measurable outcomes

Project Analysis

Projected Costs: $60,000

A. Establish Web Site - $10,000

B. Cost to develop interactive programs between web site and VA systems - $23,000

C. On going operation of web site - $12,000 a year

D. Training for users and publicity - $15,000

Funding Sources:

A. Intergovernmental grants
B. Agency operating budget
C. Special projects budget from state and federal government agencies.

Benchmarks

A. Improve access to veterans benefits results in an increase in the number of veterans receiving benefits in Iowa and an increase in the dollar amount of benefits delivered.

B. Allowing the veteran to initiate automatic processing of claims will result in reduced transaction costs.

C. Allowing the veteran to self-initiate the claims process will result in improved access to benefits.

Barriers to Project

Chief barriers involve crossing government and judicial boundaries. A need for marketing in order to encourage citizens to use the electronic services. The need to train people to ensure the customers receive proper guidance.

ROADMAP TO A RESPONSIVE GOVERNMENT

The State of Iowa, in partnership with the federal General Services Administration, took an important first step of a longer-term process when it brought together representatives from local, state, and federal government and the private sector to help plan for intergovernmental planning for technology and information management.

The IITT Task Force mission states: "To prepare a road map that seamlessly employs the most cost effective, consumer friendly technology, allowing citizens to easily access all levels of government and conduct business with each other."

The mission is noble, and reasonable. It reflects what most citizens desire - the ability to access government and benefit from government services regardless of their location or socio-economic status. The mission also suggests what government desires -- the ability to provide information and services effectively and efficiently. **The challenge for the future is to transform the mission into a reality.**

In developing this road map to the future, the Task Force expects government to continue well beyond traditional government cooperation or collaboration. In fact, it requires government to go beyond the expectations of citizens and even government itself. While there are cynics who believe that

government can not cooperate and integrate its own systems, this can be the beginning of a successful longer-term effort to implement true intergovernmental services using technology as the centerpiece.

It is also important to understand that success does not depend on the adaption and availability of technology as much as the capacity and wherewithal of citizens and individuals who work in government at all levels.

The roadmap becomes clearer as new organizational structures are developed to bring government officials of all levels together, and citizens and customers become more involved in the organizational structures, long-term planning, and the implementation of new models. This broad-based integration is the critical component of success.

Within the Task Force process, five work groups were formed and each produced a report focusing on critical issues and barriers, as well as specific projects, to implementing intergovernmental technology in the areas of general government, criminal justice and public safety, human services, electronic commerce, and geographic information.

From those reports, the Task Force identified 11 intergovernmental technology models that lay the foundation for the government of the future -- the virtual

government. More important than these 11 priority models was the work of each of the work groups and the task force. That work modeled a dynamic process that can be used long-term in developing intergovernmental technology efforts.

The work of the Task Force makes the road clearer. The formation of such a group was a major step in paving the road to the future. As this phase of the Task Force winds down, it is even more crucial for government, in concert with Iowa's citizens, to develop methods and mechanisms to sustain this process. Resources for government services will need to be more directed.

Earmarked project dollars will diminish and funding resources are expected to result in very specific outcomes. Citizens and other customers will wrestle with their own anxieties about system changes that come as a result of technology. Agencies and individuals within government will be required to adjust their organizational and individual behavior. Managing this process will require careful monitoring of this dynamic process and a great deal of strength and flexibility as planning moves toward implementation.

The Intergovernmental Information Technology and Telecommunications (IITT) Task Force recognized early in this planning process that federal, state and local governments needed a roadmap that would take them into the future. This roadmap will be used to guide investment in technology, and linked with individual and collective government plans, will take the state closer to its vision for the future.

The Task Force realizes that for the road to be cleared and this roadmap to the future to be used, government agencies at all levels need to commit to a common mission that allows citizens to easily access all levels of government and conduct business with each other.

Where Do We Go From Here?

1. Support the Integration & Funding of Technology at All Levels.

The IITT Task Force benefitted from the participation of two integral components of state technology services - the Iowa Communications Network and the newly created Iowa Information Technology Services. Both representatives simultaneously expanded the scope of the IITT Task Force discussions and focused the discussions on what was real and possible.

➢ **The IITT supports the efforts of government to meet the needs of its agencies, departments, and personnel by integrating and funding technology.** Technology permits new and innovative approaches to government service delivery and internal processes. The integration of technology on an individual government basis is essential — as are the linkages to other levels of government. Local government integration is of particular importance.

Funding for the innovations that technology allows is essential. Intergovernmental projects will most likely be funded through a patchwork of federal, state, local, and private dollars. The models recommended in this report, and future intergovernmental models, need a stable source of funding in order to succeed. Government will need to address stability in funding, investment in innovation, and the disparity of resources available at each level of government.

Funding and integration of technology efforts will have profound operational impacts, including the ability of government to respond to the changing and diverse needs of its customers.

2. Continue the IITT Process.

The process of creating, maintaining, and augmenting a more responsive, virtual government has started with the IITT Task Force. The goals that have been established, the information framed, and the approach outlined in this report are dynamic and must be continually updated and evaluated as government moves forward in planning for the future.

The benefits to intergovernmental planning are explicit in this report. Intergovernmental planning removes barriers and encourages cooperation. The citizen ultimately benefits – either directly from service improvements or indirectly through better use of tax dollars. The IITT recognizes the new and important role of ITS and ICN in the integration of technology services at the state level. Likewise, it is important that the links to other levels of government are maintained and integration encouraged. *For these reasons, it is important that the IITT Task Force continue to work toward collaboration and, eventually, integration.*

➢ **Restructure the IITT Task Force** to provide better geographic representation, expanded local government representation, private sector involvement, and other factors as identified by ITS.

➢ **Expand the role of the IITT as an advisor to ITS in the implementation of projects recommended through this process.** Continuity will be vital when it comes to making the theoretical possible.

➢ **Develop a two-step plan for the continuance of the IITT.** The IITT should continue in its efforts to encourage and promote the use of technology to create a seamless, intergovernmental system -- a virtual government. The IITT should continue to engage a broad range of individuals with the specific charge to search for ways to increase the capacity of government to provide electronic services to citizens, and increase the capacity of citizens to obtain electronic services from government.

➢ **The IITT should continue to expand its role in creating a more responsive, virtual government.** This expansion is seen in two distinct phases:

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Phase 1 -- The Task Force recommends that the IITT continue its mission as an advisory committee. The expanded and enhanced IITT will continue to provide a venue for developing, implementing, and expanding intergovernmental opportunities.

During this phase, the IITT Task Force should establish an Intergovernmental Committee on Interoperability that includes representatives of the private sector (including private telecommunications providers), federal government, state government, local government, and the public in developing interoperability policies. Based on the assessments and the future direction of government, the interoperability committee should make recommendations on the level of interoperability and how this interoperability will be clearly communicated throughout government and to the public.

Also during this phase, the new IITT needs to develop a plan for the creation of an Intergovernmental Technology Network -- a user group that would bring people together for the common purpose of increasing citizen and government capacity to use and form a virtual government. This plan outlines the second phase in the IITT process.

Phase 2 -- The Task Force recommends that the IITT implement the plan for the creation and development of an Intergovernmental

Technology Network. The broad network base will help facilitate projects and develop community solutions that involve the private sector. This second phase is a natural expansion, using the IITT to bridge the concerns and ideas of the broad customer and user base with the challenges and innovations of government agencies. This network of users will also help communicate needs of interoperability; market government technology initiatives; provide a mechanism for customer input into planning, design, and implementation; and address customer concerns such as privacy and security.

➢ **Build on the progress and successes of the IITT -- don't duplicate the work that has been completed.** The IITT did a tremendous amount of work in a nine-month period of time. Government agencies should not duplicate this work when implementing projects recommended by this process -- or those pursued independently by agencies. The information contained in the work group reports gives excellent guidance to enterprise-wide planners in the development of systems and structures that work for both the citizen and government.

The IITT should continue to play a role. To ensure the intergovernmental cooperation efforts that were initiated through the Task Force continues, it is recommended that the Task Force continue to play an advisory role to the Iowa

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Information Technology Services (ITS), which will implement the projects.

ITS, working with the appropriate work group chair and appropriate department heads, should recommend implementation teams for projects that include linkages to the work group efforts. ITS is encouraged to use the expertise of work group members who were instrumental in outlining the projects to develop and implement them as well. These individuals, who represent all levels of government, can provide continuity to project development as well as assure communication among agencies at all levels is achieved.

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3. Create the Base for Virtual Government.

Working together with local and federal governmental entities, government needs to take the lead to develop an Electronic Commerce and Citizen Information Network platform that will allow the virtual government to take shape. Once the platforms are established and the basic foundation is laid for a virtual government, other governmental entities can take advantage of it. There are several activities that need to take place before this virtual government can become a reality.

➢ **Develop an electronic commerce platform** -- ITS needs to convene a group of internal state experts (including ICN representatives), private sector experts, customer service representatives, and individuals from other levels of government to develop a standard electronic commerce platform that addresses security, automatic redaction, monetary exchanges, mode of access, and other issues identified by the group. Selected individuals from the Electronic Commerce Work Group should be engaged in this process to provide continuity, and eliminate duplication of effort.

➢ **Assess electronic commerce plans** -- the group developing the common electronic commerce platform will need to internally assess the current and planned uses of electronic commerce in state, federal, and local government and integrate those efforts into the common electronic commerce platform. The goal needs to be minimal duplication -- with a common system for electronic commerce.

➢ **Assess data warehouses and recommend ways to link commonly used data** -- Agencies collect and maintain duplicate data. If data is to be accessed seamlessly, it must be linked to other agencies and governments. For this reason, standard data fields may be needed or electronic links must be established to similar data fields. The most efficient and effective choice should be made, and expectations should be communicated to all levels and agencies.

➢ **Compile a Directory of In-House Information Expertise**. Internal expertise is spread

throughout government -- but there is no listing of these resources. Departments may need to call upon each other at various times to make sure that systems are interoperable. This listing could be extremely useful in those instances. Groups working on the development of this guide should work with individuals responsible for the development of "Talent Online," a similar directory created specifically for K-12 educational use.

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4. Involve Citizens in Developing Access Plans.

The IITT presented several alternatives in providing universal access to a virtual government. This was described in depth in many work group reports, and in the operational issues section of this report. The IITT Task Force agreed that government can not expect to take the "Field of Dreams" approach -- build it and they will come. The State needs to work with other levels of government, particularly local government, and the private sector to address how and where citizens will access the virtual government.

Government needs to avoid getting into situations where some departments use kiosks while others use Internet terminals, and little or no interconnection is available. When cellular towers went up around the country, citizens were angered by the lack of city-wide planning that went into locating these edifices. Citizens wanted to know why companies couldn't co-locate their antennas on the same towers, reducing the total number of towers going up. San Francisco did require this, but other cities did not.

Citizens want technology to be implemented in a coordinated and planful way -- and government should take heed of the private sector example. Government needs to work together to achieve its goal of creating a virtual government that is accessible to all Iowans. This can be done in a number of ways, but the process needs to begin with a unified approach involving government and its customers.

➢ **Appoint a Citizen Advisory Group** -- A Citizen Advisory Group should be formed to assist the IITT and government agencies address the issues of access to a virtual government and privacy and confidentiality of citizen information. This group should be used to advise and assist teams assigned to implementing the models suggested in this report, particularly during the development of the project implementation plans and the evaluation of program successes.

As the issues grow more complex and more services and information are offered electronically, this group may find the need for the formation of an independent Privacy Council, to be appointed by the Governor or Legislature, and potentially housed in the Ombudsman's Office or the Office of the Consumer Advocate. Many other states have appointed such a council because of growing concerns about privacy in an electronic environment. However, the

Citizen Advisory Group will continue to advocate for customer needs as they relate to privacy, confidentiality, and access.

This group should include government representatives from all levels, local governments, government employees that work directly with customers, citizens, libraries, private businesses, information providers, constituency groups, and internal/external technology experts that can assist in making recommendations on technologies used to conform to the specifications made by this largely non-technical group.

Recognizing the potentially large role of libraries in providing access to government services, the IITT Task Force recommended that Carol French Johnson lead this group. Because of her participation in the IITT process as the library representative, Ms. French Johnson will provide continuity and help ensure integration of efforts.

➢ **Design & implement a Customer Education & Awareness Program that markets intergovernmental models and virtual government concepts to customers**. Government should develop a comprehensive education and awareness program for all customers -- citizens and businesses, and government customers -- to help them feel comfortable with and trust government services delivered using technology. In addition, government should take the lead to develop ongoing training and support for all customer groups to ensure correct and expanded use of the seamless system of service delivery. This plan should market the use of technology to interact with multiple levels of government seamlessly, address the concerns of customers, and focus on the convenience and value-added components of a virtual government.

➢ **Involve citizens through focus groups and other evaluation mechanisms** -- Customer input periodically throughout the planning, design, implementation, and continuance of a project can help direct efforts.

5. Encourage Interagency and Intergovernmental Partnerships with the Private Sector.

Technology should never become the barrier to creating a government that is responsive, efficient, and effective. The private sector -- telecommunications industry and other unrelated private businesses -- need to be engaged in determining solutions that work for everyone.

➢ **Involve private sector in project implementation** -- Because the private sector can provide insightful information to technology planning, it is recommended that Iowa Information Technology Services engage private sector

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representatives in developing and implementing projects and include them in future planning efforts. Early and active involvement by key private sector stakeholders should be sought.

> **Expand IITT membership to include private sector representatives** -- Citizens are not the only customers of government, and the ICN is not the only provider of telecommunications services to government entities. The private sector (private business and industry, as well as private telecommunications providers) should be involved in planning for a virtual government, and in working together to make that happen. Community and private partnerships should be a goal in bringing government to the people.

The IITT process involved the private sector at the work group level – but not on the Task Force level. Private sector involvement in future planning efforts is important to ensure government plans are integrated and in sync with private sector trends.

> **Encourage private sector solutions** -- The IITT Task Force supports governmental efforts to work with the private sector in creating innovative solutions that give all Iowans, regardless of where they live in the state, affordable and dependable access to the Internet, or other mechanisms for accessing government services. In addition, government should look for private partnerships that create mutually beneficial

situations *(like the grocery store - post office scenario).*

> **Involve the private sector in discussions about standards, interoperability, or electronic commerce platforms** -- Private sector involvement is the key to assuring that interoperability parameters are compatible with and driven by the market. This allows government to communicate effectively and efficiently with its citizens, businesses, and other levels of government.

6. Integrate Interagency and Intergovernmental Models & Empower Leaders.

The models presented in this report begin the process of creating a seamless government – a virtual government. Individuals involved in the design, implementation, and evaluation of intergovernmental technology models should communicate on a regular basis to ensure consistency and eliminate duplication. Ongoing communications, empowering leaders, and integrating technology efforts will encourage innovation in government.

New approaches, such as the ones suggested in this report, and the empowerment of leaders elevates risk. These models begin the process of transforming government, and with that transformation comes risk.

With risk comes the opportunity for huge successes and benefits, as well as the chance for failure. It is important that government leaders understand and identify this risk, learn from failures and capitalize on successes, and continue to try innovative approaches that will make government more responsive, efficient, and effective.

> **Identify and accept the risks associated with innovations** -- Pursuing innovations in service delivery and government processes elevates risk. Government leaders need to be empowered to try new things, but management needs to be tolerant of failures if it is going to achieve the successes desired. Project leaders, managers, and other government leaders need to accept the risks associated with this transformation, learn from failures, and capitalize on successes in order to successfully travel the path of innovation.

> **Empower implementation teams** – Upper management must fully empower the teams responsible for implementing the projects selected by the Task Force (and other technology projects) to get them accomplished. Teams must have both the authority and the accountability for accomplishing the projects. In addition, planning and project management should not be so rigid as to limit the ability to deal with unforeseen difficulties or take advantage of unforeseen opportunities. It is important that government decision-making structures reflect this need.

> **Empower project leaders** -- Decisiveness by project teams and managers will help lead to better returns on investment and higher quality results. Leadership should be identified as soon as possible for each of the new models selected by the Task Force for implementation. Both a lead organization and a lead project manager should be selected, with project teams including individuals that cross agency and government lines. The major participants in the project should all be in agreement on the leaders and then provide support.

> **Analyze outcomes of new models to identify successes**. Quantitative goals, benchmarks, and timetables should be set for all of the projects implemented. The existence of quantified goals (objectives), benchmarks (measures of progress toward those goals), and timetables will provide critical feedback throughout the process of implementation.

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7. Encourage Innovation & Collaboration.

Government needs to develop and expand opportunities for collaboration with the private sector and other levels of government (including other states) in mutually beneficial areas of customer service and service delivery.

At the same time, government policy makers and enterprise leaders need to remove disincentives to cooperation and empower agencies, enterprises, and levels of government

to increase accountability and encourage intergovernmental opportunities.

➢ **Develop budgetary incentives which encourage innovation and collaboration** -- Government may want to provide budgetary incentives for agencies and departments that are following enterprise-wide technology plans and are taking innovative approaches involving technology.

➢ **Empower agencies to work together** -- Agencies can be empowered to work together using waivers, incentives, statutory changes, and other such authorization measures. Disincentives to intergovernmental cooperation and collaboration need to be removed at all levels of government.

➢ **Develop enterprise-wide communication streams** -- Government should look for ways to keep all departments and agencies informed about the progress of projects.

In addition, this communication should go both ways, and departments and agencies should communicate about innovations they are planning. An electronic bulletin board, newsletters, and regular meetings can help achieve this task. Intergovernmental communications could occur through meetings and presentations to government association groups, and primarily through the IITT.

The models recommended through this process place a premium on effective communications among team members, managers, customers, vendors, and other key players. Communications will help on a number of levels. Interagency communication will begin the process of bridging projects and programs.

Additional copies of this report and the five individual
work group reports can be obtained by contacting:

State Public Policy Group
515/243-2000
campbell@sppg.com

Criminal Justice & Public Safety Work Group

Paul Wieck, Chair
John Jones, Vice-Chair
Phylliss Henry, Vice-Chair

State: Ellen Gordon, *Iowa Department of Public Defense--Emergency Management Division*
Major John Grote, *Iowa National Guard*
Sally Chandler Halford, *Iowa Department of Corrections*
Charlie Krogmeier, *Iowa Attorney General's Office*
Larry Murphy, *Iowa Court Information System*
Gene Shepard, *Iowa Law Enforcement Academy*
Paul Wieck, *Iowa Department of Public Safety*

Federal: Kevin Curren, *Federal Bureau of Investigation*
Phylliss Henry, *US Marshal (US Department of Justice)*
Hon. Lee Jackwig, *US Bankruptcy Judge (US Courts)*
John Miller, *FEMA Regional Office*
Bruce Upchurch, *Drug Enforcement Agency*
Dave Webb, *Bureau of Alcohol, Tobacco, & Firearms*

Local: Mike Bladel, *Scott County Sheriff*
Gary Hinzman, *6th Judicial District, Department of Corrections*
John Jones, *Des Moines Police Department*
George Oster, *Joint Fire Safety Council*
Mark Prosser, *Storm Lake Police Department*
Terry Reekers, *Emmet County Emergency Management Agency*
Marvin Van Haaften, *Marion County Sheriff*
David Welu, *Iowa County Attorney's Association*

SPPG Staff Team: Arlinda McKeen and Clark Conover
ICN Liaison: Paul Jacobson

Electronic Commerce Work Group

Cynthia Eisenhauer, Chair

State: Mary Jane Beach, *The University of Iowa*
Cynthia Eisenhauer, *Iowa Workforce Development*
Rich Jacobs, *Iowa Department of Revenue and Finance*
John Nimmo, *Iowa Department of Transportation*
Leon Schwartz, *Iowa Department of Economic Development*
Jim Struve, *Iowa Lottery Commission*
Ray Vawter, *Iowa Commerce Commission*

Federal: Jack Hackett, *Veterans Administration*

Local: Mary Maloney, *Polk County Treasurer*

Private: Chris Davis, *ITS, Inc.*
Kari Klima, *The Dakota Group*
Melvin Lee, *Transactive Corporation*

SPPG Staff Team: Joe Shannahan and Ben Grimley
ICN Liaison: Jackie Pullen

General Government Work Group

Janet Phipps, Chair
Jerry Gorden, Vice Chair

State:
David Boyd, *Iowa Supreme Court*
George Covert, *Iowa State University Computation Center*
Jerry Gorden, *Iowa Communications Network*
Mark Laurenzo, *Iowa Department of Economic Development*
Janet Phipps, *Iowa Department of General Services*
Jerry Reid, *Iowa Department of Management*
Darlas Shockley, *Indian Hills Community College*
Col. John Tymeson, *Iowa National Guard*

Federal:
Daryl Gray, *Social Security Administration (Region VII)*
Henry Lai, *US General Services Administration*
Tom Lynch, *US Department of Veterans Affairs*
Bill Morgan, *US General Services Administration*

Local:
Bob Borchers, *Hawarden Municipal Utilities*
Virginia Bordwell, *Washington County Supervisor*
Mark Jackson, *Story City Administrator*
Curt Mineart, *Washington County Auditor*
Tim Ostroski, *Southern Iowa Council of Governments*
Katherine Von Wald, *Central Iowa Regional Library*

Private:
Bob Farnham, *Graceland College*

SPPG Staff Team: Amy Campbell, Shannon Tyler, and Joe Shannahan
ICN Liaison: Jerry Gorden

Geographic Information Systems Work Group

Marty Adkins, Chair
Kevin Kane, Vice Chair

State:
Joyce Baker, *The University of Iowa, Social Science Institute*
Terry Brase, *Hawkeye Community College, Agriculture and Food Technology*
Mike Elliott, *Iowa Department of Public Defense*
Kevin Kane, *Iowa Department of Natural Resources*
Peggi Knight, *Iowa Department of Transportation*
Roger Patocka, *Iowa Lakes Community College*
Tom Sanchez, *Iowa State University, Department of Community and Regional Planning*
Reg Souleyrette, *Iowa State University, Center for Transportation Research and Education*

Federal:
Marty Adkins, *US Department of Agriculture*
Harry Bottorff, *Rock Island District Corps of Engineers*
Cory Brockmann, *US Department of Agriculture, Natural Resource Conservation Service*

Local:
Dan Holderness, *City of Coralville*
Harold Jensen, *Story County Engineer*
Tom Kane, *Des Moines Area Metropolitan Planning Organization*
Brian Miller, *Cedar Falls Municipal Utility*
Jerry Musser, *Johnson County Assessor*
David Pahlas, *Decorah Water Department*
Ed Raber, *East Central Iowa Association*

Private:
Randy Hertz, *Hertz Farm Management*
Robert Newcomer, *Newcomer Engineering*

SPPG Staff Team: Tori Squires and Joe Shannahan
Technical Support: David Plazak, Resource Planning Associates, Inc.
ICN Liaison: Ron Koontz

Human Services Work Group

Charles Palmer, Chair
Sally Cunningham, Vice-Chair

State:
Charles Palmer, *Iowa Department of Human Services*
Sally Cunningham, *Iowa Department of Human Services*
Marge Knudsen, *Iowa Department of Education, Division of Vocational Rehabilitation*
John Posner, *Iowa Department of Education, Division of Vocational Rehabilitation, Disability Determination Services Bureau*
Lee Tack, *Iowa Department of Education*
Lynn Paustian, *Iowa Department of Employment Services*
Chris Atchison, *Iowa Department of Public Health*
Ron Amosson, *Iowa Department of Management*

Local:
Robert Olson, *Story County Information Services*
John Rolff, *Mayor of Waterloo*
Janet Carl, *Mid-Iowa Community Action, Inc.*
John Calhoun, *Sioux City Juvenile Court*
John Brandt, *Linn County Human Resources Management*
Ron Diimig, *Educational Service Center, Council Bluffs Community Schools*
Lawrence Barker, *Scott County Health Department*

Federal:
Norm Bauer, *US Department of Veterans Affairs*
John Wilkinson, *Veterans Administration Hospital*
John Erwin, *Social Security Administration*
Harry McDaniel, *US Department of Health and Human Services*
Max Smith, *US Department of Health and Human Services*

Private:
Perry Meyer, *Iowa Hospital Association*
Roger Gutmann, *Lutheran Social Services*
Paul Pietzch, *Health Policy Center*
Marty Ozga, *Legal Aid of Iowa*
Mark Haverland, *Consumer Health Information, Inc*
Donna Rhone, *Hawkeye Valley Area Agency on Aging*

SPPG Staff Team: Deb Kazmerzak, Shannon Tyler, and Tom Slater
ICN Liaison: Tami Fujinaka

STATE PUBLIC POLICY GROUP
TECHNOLOGY SURVEY—INFORMATION REQUEST

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NOVEMBER 1996

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TECHNOLOGY SURVEY — INFORMATION REQUEST

SUMMARY OF KEY FINDINGS

Information needs are idiosyncratic, but the benefits of telecommunication technology are universal. What they might use the technology for varies, but why they would want to use it is focused: saving time, money and resources.

Three open-ended questions in the survey (Q.9, Q.11 and Q.12) solicit data regarding current information uses and future information needs of respondents. For all three questions, answers vary widely. Reading through the comments it is apparent that the variety of respondents' activities dictate the variety of their governmental information needs. Some want market information, others seek entitlement program information; census data also is popular. Other data use and requests include: job placement information; extension reports; JTPA or LSB/LFB information; and, utility and transportation data. Of course, tax forms and related information are high priorities.

Respondents desire a variety of information. In other words, they want what they need in order to do their jobs; and their jobs vary. It is a cacophony of data requests. When it comes to the benefits of telecommunication technology, however, respondents sing a simple melody: Telecommunication technologies save time, save money, boost efficiency, offer top quality information, enhance communication and access, and decrease paperwork. In a word, telecommunication technologies make doing their jobs easier and better. Local librarians and small businesses, hospital staff and state administrative staff all agree on this point, regardless of their information needs.

The benefits offered by telecommunication technologies give it nearly universal appeal. Who doesn't want to work faster and smarter? Two-thirds (67%) of respondents say it is very important to incorporate these tools into the work they do. Another 23% say it is fairly important to do so, leaving virtually no one (2%) who says telecommunication technologies are not important.

The most popular telecommunication technologies are on-line. Two-thirds of respondents currently use e-mail (66%) or the Internet (64%). Another 39% use Web pages in their work, making it the forth most used technology. Voice mail is third, with 42% currently using the communication system. Not only are on-line tools the most used today, but respondents envision using them even more tomorrow. When asked which technologies they plan to use in the next three years, 71% say they will incorporate Internet resources into their work, 67% plan to use e-mail, and 57% think Web pages will have something to offer.

Video conferencing is one of the resources with the most potential, according to respondents. Currently, one-quarter (26%) of respondents use the electronic meeting medium, but in the next three years, 45% intend to conduct business in the electronic boardroom.

Businesses recognize the competitive advantage of telecommunication technology use. Respondents who work for private business report the highest level of telecommunication technology use in general. Just 5% of businesses say they currently do not use what they would call telecommunication technology. This compares to 13% of non-profit and professional organizations who don't currently use such technology, 14% of education and library institutions, and 21% of government entities.

Further, businesses are typically the heaviest users of specific technologies. Respondents in the private sector report the highest level of usage for five of the eight specific technologies tested: voice mail (62% currently use this technology); direct deposit (53%); Web pages (48%); filing taxes (24%); and, ATM (24%).

For the other three tested telecommunication tools, educational and library entities report the highest use, with business use close on their heels. Seventy-nine percent (79%) of educational and library institutions use the Internet (72% of businesses report usage), and 78% use e-mail (69% for business). Video conferencing use is nearly even between three types of organizations: educational/library (32%), government (29%), and business (28%).

Governmental organizations lag behind. One-in-five (21%) respondents from local, state and federal governments say they currently do not use telecommunication technologies. And among those who do use these tool, they typically use specific technologies the least. E-mail is the only technology used by a majority of government respondents (55% currently use it). Moreover, a majority (57%) of governmental respondents consider themselves either low-level users (34%) or non-users (23%) of telecommunication technologies.

Non-profit and professional associations are struggling, but they seem to recognize the potential of telecommunication technology use. These organizations are most likely of any type of workplace to be light users of electronic communication technologies. Nearly half (48%) say they are low-level users, and another 31% consider themselves mid-level users. Just 9% say they are heavy users of these technologies. They may not use these technologies as extensively as others, but they are using: Just 13% say they are currently non-users of telecommunication technology.

They may not currently use telecommunication technologies extensively, but non-profits and professional associations seem to be among the technologies' most enthusiastic supporters. They value the tools: 63% say these technologies are very important, on a par with businesses' 64%. And they see the technology in their futures: These organizations report the highest anticipated use of any other type of organization for four of the eight tested technologies (See table "Intended Telecommunication Use").

The biggest obstacle is cost. When asked what stands in the way of using telecommunication technologies more, the bottom-line demands justification. Thirty-five percent (35%) of respondents say the cost of the equipment is one of their reasons for not using telecommunication technologies more. Nearly as many (33%) say the cost of service is prohibitive.

Other obstacles appear less of a concern: 17% lack the training to use it; 11% say they don't know how to access it; and 10% say it is not available in their area. While these reasons affect fewer respondents, they may be the easiest to overcome.

Justifying the cost of equipment and service become easier the more respondents use telecommunication technologies. As respondents compile more experience with electronic communication the cost seems less of an issue. Among heavy users 19% say the cost of the service is too high; 26% of mid-level users say the same, as do 40% of low-level users, and 51% of non-users.

More will conduct governmental business electronically as long as it meets certain criteria: It needs to be easy, affordable, and secure. At one point in the survey, we ask respondents if they would file reports, complete transactions and access information if government offered an electronic option. The clear answer is yes: 51% have no hesitation about it, and just 8% would decline. Another 21% say they would conduct governmental business electronically if certain conditions are met. Reading through their hand-written conditions, most cluster around three themes: The system must be easy to use; it must be secure; and it must be affordable.

Few respondents have any problem with government offering services and information electronically. Eighty-two percent (82%) say such a role is proper for government. Eighty-four percent (84%) say government ought to educate people about what is available electronically.

STRATEGIES AND RECOMMENDATIONS

The findings from this survey of 359 organizations around Iowa suggest some communication strategies for expanding the role of telecommunication technologies in governmental affairs. We offer some of those insights here.

1. **Emphasize the competitive advantage: productivity.** Those who currently use telecommunication technologies don't need to be sold on the benefits. People with less experience, however, may need some help in justifying the up-front resource expenditure necessary before the benefits become apparent. If telecommunication technologies are an investment, it would appear a sound one. Those who have already made the investment are the most eager to invest even more.

2. **Educate on the basics.** Many respondents don't need to be sold on the benefits of telecommunication technologies. But if they are going to be able to access those benefits for themselves, the technology can't stand in the way: It needs to be easy and accessible.

In other words, the media is not the message. Respondents don't necessarily want to be on-line. They want the information and the speed and the access that being on-line can give them.

3. **Let the experienced lead the way.** Those with the most telecommunication technology experience are the most enthusiastic about expanding their use of these tools and they are the least concerned about any potential obstacles. The stories they might tell, the teaching they might do, and the insights they may have could prove to be a tremendous resource in creating the electronic town square.

4. **Focus on government.** If governmental business is to be the bulk of the services and information available electronically, then governmental entities need to move closer to the pack in terms of their current use and incorporation of telecommunication technologies. If they lag too far behind, they will drag others with them.

5. **Surf the net; meet in the electronic boardroom.** On-line services, like e-mail and the Internet, currently hold the dominant position among telecommunication technologies. Their advantage may be the flexibility and seemingly unlimited potential of the system (after all, theoretically *everyone* could one day be on-line). It seems that on-line is where much of the enthusiasm for the future originates. Take advantage of this energy. However, do not overlook the potential of video conferencing; if the equipment and service costs can be overcome, respondents express an affinity for this technology.

TABLES

CURRENT TELECOMM TECHNOLOGY USE

	Internet %	WWW Page %	E-Mail %	Voice Mail %	Dir. Dep. %	File Taxes %	ATM %	Video Conf. %	None %
Total	64	39	66	42	39	13	18	26	14
Workplace									
Education/library	79	46	78	37	34	8	17	32	14
Business	72	48	69	62	53	24	24	28	5
Government	45	29	55	36	39	12	17	29	21
Non-profit/ associations	60	40	60	44	38	17	19	19	13
Level of TeleComm Tech Use									
Heavy	98	83	95	78	67	22	32	57	-
Mid-level	89	53	88	47	45	17	21	35	-
Low-level	44	16	51	32	33	9	16	11	8
Non-user	-	-	2	4	4	2	-	-	84
TeleComm Importance									
Very Important	78	50	77	50	46	16	22	33	6
Fairly Important	40	23	48	29	29	8	15	14	25

LEVEL OF TELECOMM TECHNOLOGY USE

	Heavy User %	Mid-level User %	Low Level User %	Non-User %
Total	18	37	31	14
Workplace				
Education/library	20	48	17	12
Business	31	31	31	7
Government	9	35	34	23
Non-profit/ associations	8	31	48	13
Level of TeleComm Tech Use				
Heavy	100	-	-	-
Mid-level	-	100	-	-
Low-level	-	-	100	-
Non-user	-	-	-	100
TeleComm Importance				
Very Important	24	43	27	5
Fairly Important	4	29	42	25

REASONS FOR NOT USING TELECOMM MORE OFTEN

	Service Cost %	Don't know how to Use %	Don't know how Access %	Equip-ment Cost %	Not Avial-able in my Area %	Not Inter-ested %	Not Neces-sary %	None of these %	Other %
Total	33	17	11	35	10	2	14	10	16
Workplace									
Education/library	36	14	8	44	11	1	7	11	15
Business	22	16	5	28	2	5	19	17	17
Government	31	17	11	34	13	1	16	18	8
Non-profit/ associations	50	21	19	44	13	2	13	15	4
Level of TeleComm Tech Use									
Heavy	19	6	5	16	11	2	6	16	24
Mid-level	26	17	10	30	6	2	15	20	11
Low-level	40	24	13	46	14	1	17	13	3
Non-user	51	14	16	51	8	4	12	14	4
TeleComm Importance									
Very Important	32	17	11	36	12	-	10	18	10
Fairly Important	32	19	8	37	5	4	19	8	10

IMPORTANCE OF TELECOMM TECHNOLOGY

	Very Important %	Fairly Important %	Not Important %	Not Sure %
Total	67	23	2	4
Workplace				
Education/library	81	12	1	2
Business	64	28	5	2
Government	53	31	4	10
Non-profit/ associations	63	29	-	2
Level of TeleComm Tech Use				
Heavy	92	5	-	-
Mid-level	79	18	-	-
Low-level	59	31	3	5
Non-user	22	43	10	18
TeleComm Importance				
Very Important	100	-	-	-
Fairly Important	-	100	-	-

INTENDED TELECOMM USE

	Inter net %	WWW Page %	E- Mail %	Voice Mail %	Dir. Dep. %	File Taxes %	ATM %	Video Conf. %	None %
Total	71	57	67	48	35	23	18	45	5
Workplace									
Education/library	81	62	72	42	29	15	14	54	3
Business	60	57	59	47	53	43	24	43	7
Government	63	50	64	52	34	17	17	44	6
Non-profit/ associations	81	65	73	56	31	27	15	31	4
Level of TeleComm Tech Use									
Heavy	78	75	76	67	59	37	44	71	-
Mid-level	77	69	73	51	36	27	17	54	2
Low-level	71	49	65	47	32	16	10	37	2
Non-user	49	20	41	18	10	12	4	6	27
TeleComm Importance									
Very Important	80	66	71	55	41	26	22	54	2
Fairly Important	61	44	67	37	29	21	11	29	5

GOVERNMENT ROLE: OFFER SERVICES ELECTRONICALLY

	Yes %	No %
Total	82	13
Workplace		
Education/library	92	6
Business	64	33
Government	83	10
Non-profit/ associations	94	2
Level of TeleComm Tech Use		
Heavy	78	16
Mid-level	87	11
Low-level	84	10
Non-user	67	24
TeleComm Importance		
Very Important	88	9
Fairly Important	75	18

GOVERNMENT ROLE: EDUCATE ABOUT AVAILABLE SERVICES

	Yes %	No %
Total	84	10
Workplace		
Education/library	94	6
Business	74	21
Government	85	7
Non-profit/ associations	92	6
Level of TeleComm Tech Use		
Heavy	86	11
Mid-level	83	9
Low-level	88	8
Non-user	78	14
TeleComm Importance		
Very Important	89	6
Fairly Important	76	18

INTENTION OF CONDUCTING GOVERMENT BUSINESS VIA TELECOMM TECHNOLOGIES

	Yes %	No %	Conditional Yes %
Total	51	8	21
Workplace			
Education/library	53	5	27
Business	43	16	22
Government	50	8	17
Non-profit/ associations	60	2	23
Level of TeleComm Tech Use			
Heavy	63	5	22
Mid-level	57	4	17
Low-level	46	10	24
Non-user	33	18	20
TeleComm Importance			
Very Important	59	4	20
Fairly Important	38	10	29

The Des Moines Register

Branstad unveils technology blueprint

The governor wants to set aside $21.5 million per year to help build the state's information infrastructure.

By JONATHAN ROOS
REGISTER STAFF WRITER

Gov. Terry Branstad on Monday unveiled a plan to set aside $21.5 million annually for state technology projects, but much of the money would have to be spent initially on ridding state government computers of the so-called "Millennium Bug."

The effort to retool computer systems that were not programmed to recognize years after 1999 could cost the state as much as $30 million over the next two to three years, according to government officials.

"We think the problem is going to be quite significant," said Jim Youngblood, director of Information Technology Services.

Already Causing Trouble

The computer-processing glitch — a problem for governments and businesses around the globe — already has cropped up in computer programs used by state government to project such things as salaries and retirement benefits into the next century, Youngblood said.

> ❝ The objective is to look into the future and find the best way to deliver services for taxpayers using technology. ❞
>
> — Edward Stanek, task force chairman

To fix the problem in state computers, about 54 million lines of computer code will have to be examined, he said. "It will take through calendar '97 and '98 to correct. We'll use '99 to test and verify that it's done."

Branstad said that expensive task will be one of the uses for the Technology Investment Account that he is proposing. The fund would tap state gambling revenue above $100 million and half of any money returned to state coffers by government agencies. The two revenue sources would pump an estimated $21.5 million per year into the account.

The money also would be used to improve state services using computers and other high-tech tools, the governor said.

"It's critically important that, in addition to the bricks-and-mortar

Branstad: $21.5 million annually to be set for technology projects

TECH

traditional sort of infrastructure, we need to build the technology infrastructure for the 21st century as well and make sure that every Iowan has access to that technology," he said.

Branstad also announced that he is setting two technology goals. One objective is seeing to it that every Iowa community has high-speed, low-cost Internet service.

Currently, about 30 percent of communities lack adequate Internet access, he said.

According to Branstad, the state can take advantage of electronic commerce to market Iowa products and promote tourism.

The second goal is to make it possible for citizens to conduct business with state government electronically from their home, business or a public place in their community.

"This means our customers will not have to travel to conduct business with the state. They can do it in their own location," Branstad said.

Much of Iowa government already is linked by fiber-optic cable. But a state task force has been meeting to discuss other ways that technology can be used to put government services and information at the fingertips of citizens.

"The objective is to look into the future and find the best way to deliver services for taxpayers using technology," said Lottery Commissioner Edward Stanek, chairman of the Intergovernmental Information Technology and Telecommunications Plan Task Force.

Members of the group, which is expected to deliver a technology plan to Branstad in February, already have done plenty of brainstorming. Here are a few of the ideas under consideration:

TOOLS OF TECHNOLOGY

■ E-mail and the Internet are the most popular telecommunications tools, according to a workplace survey of Iowans representing business, government, schools, colleges, libraries, hospitals and non-profit and professional groups.

Technology	Used currently	Expect future use
Internet	64%	71%
E-mail	66	67
World Wide Web page	39	57
Voice mail	42	48
Video conferences	26	45
Direct deposit	39	35
Electronic tax filing	13	23
ATM	18	18
None	14	5

SOURCE: Intergovernmental Information Technology and Telecommunications Plan Task Force.

THE REGISTER

• Develop a government services identification card for Iowans to use in obtaining benefits or conducting other business with various government agencies. "The card would be used to make it easier for citizens to access certain services," said Stanek.

• Create a "citizen information network" that would build on the growing use of the Internet. Various government sites on the World Wide Web would be linked, and local governments would be encouraged to join, too. More government information would be made available on the Internet, and some services even could be offered "on line."

• Establish a common data network for law enforcement and judicial agencies that would tap databases involving corrections, criminal history, sex offenders, domestic abuse and wanted persons.

• Allow people to obtain government information or sign up for services using local kiosks or community computer sites, such as libraries or even grocery stores.

• Establish a local technology loan fund, in partnership with businesses and communities, that would make money available for the purchase of computers and software. The loans could be used to help low-income Iowans or small businesses gain access to technology.

• Provide companies opening businesses in Iowa with a one-stop electronic location for obtaining the necessary forms from government agencies.

SUGGESTIONS

People with suggestions about how Iowa government can better use technology to provide services or information can send their ideas to the technology task force using this e-mail address: campbell@sppg.com