Foundations for Successful Intergovernmental Management

Federal, State, and Local Government Experiences

Intergovernmental Advisory Board
Federation of Government Information Processing Councils
in cooperation with the
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Acknowledgements

THE INTERGOVERNMENTAL ADVISORY BOARD (IAB) was established under the Federation of Government Information Processing Councils (FGIPC), a nonprofit organization that promotes IT and seeks to foster an open and constructive dialogue and exchange of ideas and information among different levels of government as well as with industry representatives. The IAB's mission is to promote knowledge and understanding of intergovernmental IT issues at the Federal, State, and local levels.

The IAB has nine members - three that represent each level of government. The chairman is Mr. Frank McDonough, Deputy Associate Administrator for Intergovernmental Solutions, Office of Governmentwide Policy, U.S. General Services Administration (GSA).

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Foreword

FOUR IMPORTANT NEW APPROACHES to managing information technology are evolving: intergovernmental management, self-service government, outsourcing, and innovative funding. These can be called mainstream trends. GSA, in conjunction with the Intergovernmental Advisory Board (IAB), published a report in January 1998 on innovative funding approaches for information technology (IT) initiatives. This report, the second in a series, analyzes the management of intergovernmental programs, identifies those factors that promote or hinder their success, and provides the foundation for a model that can be used to manage other intergovernmental initiatives.

GSA's Office of Intergovernmental Solutions recently published a report, *The Challenging Road to the Government of the Future: Intergovernmental Management Issues and Directions*, that documents three specific intergovernmental initiatives as case studies. These case studies begin to provide lessons learned for all of the managers that will grapple with intergovernmental management programs in the next few years. The following report looks at 18 more intergovernmental case studies. As our understanding of government operations grows, so does our ability to improve collaboration among different levels of governments. The result is improved services to citizens.

"Intergovernmental management" is the integration of programs horizontally across a government or across national governments. Intergovernmental management may also be the vertical integration of functions between Federal, State, and local governments. Information technology, on the other hand, provides the tools to reengineer government processes. Vice President Al Gore, in the *Access America Report*, identifies technology as the critical component to helping governments work better and cost less. It allows us to rethink, in fundamental ways, how people work and how governments serve their citizens.

Executive Summary

GSA'S OFFICE OF INTERGOVERNMENTAL SOLUTIONS, in conjunction with the Intergovernmental Advisory Board (IAB), conducted research and analyzed the management of intergovernmental programs. The objective was to identify those factors that promote or hinder program success, and build a model that can be used to manage other intergovernmental initiatives. Various program managers were contacted and asked to submit an analysis of their programs. Questions were asked about what methods were used to determine accountability and measure performance; what partnership and funding arrangements were used; and what technical, managerial, and political intergovernmental issues were encountered.

A total of 18 case studies were submitted, 8 from the State and local government perspectives and 10 from the Federal level. The case studies cover a wide variety of intergovernmental efforts. A common element among the case studies is that each program uses information technology to improve the delivery of governmental programs and services, or that technology is used to reduce the cost of government.

We found that the story of intergovernmental program management is the story of partnerships, communications, and leadership. One of the major themes emerging from the case studies is the significance of the partnership arrangements. Success depends on participants sharing a set of common visions and values, speaking the same language, and working together under some sort of formal agreement. One of the most important management techniques for ensuring success of an intergovernmental program is communications among all involved parties in terms that everyone can understand. Closely linked with partnerships and communication is the need for leadership and a common vision.

Intergovernmental program management is also the story of success against great odds. Initiatives crossing political and organizational boundaries have little impetus to succeed. There are no structural elements in place that encourage different levels of government to work together. Yet, citizens need programs that can deliver services and benefits that may originate at the Federal, State or local levels of government. Governments, on the other hand, must be able to provide public programs efficiently and economically. Collaborative efforts provide one way to do this.

Four steps can be taken to prepare intergovernmental managers. They are to expand the body of knowledge that exists about intergovernmental management; educate government managers on the benefits of initiatives that cross governmental boundaries; establish research priorities concerning intergovernmental issues; and build a network of intergovernmental program managers.

Introduction

A SUBSTANTIAL BODY OF KNOWLEDGE exists that explores the ways governments operate, answering questions about what managerial, technical, and political factors ensure the successful implementation of public programs and services. Most of the research is based on analyzing large, complex organizations represented by a single government organization, usually at the Federal level. However, regulatory reform, devolution, citizen demands, and funding constraints have forced governments to find new ways to manage public programs. Intergovernmental collaboration is one solution and research is beginning to accumulate on what makes intergovernmental programs successful.

The key to understanding intergovernmental management is to recognize that there can be several different types of intergovernmental management. "Intergovernmental management" is the integration of programs horizontally across one level of government (one federal agency collaborating with another federal agency) or across national governments (country to country). Intergovernmental management may also be the vertical integration of programs between Federal, State, and local governments. Some examples will help to make this clear. The U. S. Federal Government's Blue Pages Project provides a good example of horizontal integration. The goal of this project is to provide clearly written, easy to read, sensibly organized directory pages in telephone books so that citizens can readily access public programs and services without having to understand government structure.

At the Federal level, the Blue Pages Project requires the coordination of most Federal departments and agencies; is chaired by one Federal agency, the General Services Administration; and has established partnerships between the Government and the private sector. In this example, one level of government is involved, and programs are integrated across agencies.

Another example illustrates the principal of vertical integration. The Federal Bureau of Investigation (FBI) has an initiative to upgrade its fingerprint identification process with a technologically advanced, automated system. At the Federal level, this initiative required the efforts of the Department of Justice, the American National Standards Institute, and the National Institute of Standards and Technology to develop national standards for capturing and transmitting electronic fingerprint data. At the State and local levels, the initiative developed a cost-effective system for police departments to scan fingerprint cards, store images and transmit and receive data. The initiative involved representatives from the Federal Government, State and local law enforcement agencies, the Judiciary, correctional institutions, and prosecutors.

Intergovernmental management provides many new and not well understood challenges. This paper looks at a number of intergovernmental programs at the Federal, State, and local levels in the United States. The United States has 3,300 county governments, 3,700 city governments, 50 State governments; the Federal Government consists of over 100 agencies and departments. Elected officials in all of these entities

influence the way these organizations are managed. Cooperation, collaboration, and partnerships represent a new way of doing business and one that is not always embraced.

In order to function at all, intergovernmental programs require some kind of partnership arrangements. Projects often require participating organizations to share policymaking functions, funding, and staffing. Intergovernmental approaches are necessary when no single agency or organization has the authority, resources, or expertise to address a problem that cuts across geographic and political boundaries. Successful intergovernmental approaches require a shared goal, a common vision, and a sense of solidarity among key players.

While intergovernmental programs are beginning to change the face of government by making services and programs seamless, it must be recognized that IT has made this possible. IT is the enabler of change. The Internet and web browsers are revolutionizing internal operations and the delivery of services to customers. Public, private, and government organizations are deploying Web-enabled applications to replace labor-intensive, often paper-based, administrative tasks. Business transactions are taking place electronically. Smart cards are enabling citizens to interface with their governments through a single window to public services. Geographic systems and technologies are integrating information across all levels of government.

Technology has enabled governments to reengineer themselves. Public services and programs are more efficient and less costly, and vast amounts of information are now available to the citizen. Intergovernmental collaboration has been fostered through the efficient and effective use of information technology. Who can predict what impact this will have on governance in the 21 century?

Methodology

THIS REPORT WAS COMPILED by contacting various program managers and asking them to submit an analysis or mini case study of their programs. The goal was to look at these programs and develop a management model for the use of future intergovernmental program managers. Information was requested about each program. Questions were asked about what methods were used to determine accountability and measure performance; what partnership and funding arrangements were used; and what technical, managerial, and political intergovernmental issues were encountered.

A total of 18 case studies were submitted, 8 from the State and local government perspectives and 10 from the Federal level. The case studies cover a wide variety of intergovernmental efforts in the areas of transportation, welfare reform, natural resources management, and law enforcement. The common element among the case studies is that each program uses information technology to improve the delivery of governmental programs and services, or to reduce the cost of government. Several case studies cover efforts where information is being digitized and organized so that it is readily available to the public. Other studies look at initiatives that rely on technology to deliver electronic benefits, facilitate commerce, or provide a single window to government services.

Each case study provides a point of contact and contains a section titled "Management Tips." Useful intergovernmental management guidelines are highlighted in these tips. Many reaffirm what we already know about project management. Some of them summarize the responses we received in our survey to the question "Next time, what would you do differently?"

Several intergovernmental best practices emerged from the case studies. These best practices provide the foundation for building an intergovernmental management model. But more information is needed. Plainly, our understanding of intergovernmental management is just beginning.

Managing Intergovernmental Programs Through Partnerships, Communications, and Leadership

THE STORY OF INTER-GOVERNMENTAL PROGRAM MANAGEMENT is the story of partnerships, communications, and leadership. It is also the story of success against great odds. It must be remembered that intergovernmental programs have little reason to succeed. There are no structural elements in place that encourage different levels of government to work together. Project participants are often volunteers, coming from varying backgrounds, who work in organizations that have different pay scales and reward systems. Organizations may have conflicting program objectives and perceive differing benefits coming from the intergovernmental initiative. Turf wars are not uncommon. There are no established ways to share funds, staff the project, make policy, or manage the program. In short, it's a wonder that any intergovernmental efforts succeed, or even are undertaken.

However, technology and citizen expectations are pushing governments to abandon their stovepipes and to operate seamlessly with other governments both horizontally and vertically. Internet and wireless communications are allowing people in all countries to see themselves as citizens of the world. People are forming telecommunities that have no geographic boundaries. Citizens are becoming impatient with stovepipe governments that are not serious about seamless, smooth intergovernmental management. Governments are looking for ways to reduce costs. All these factors are driving intergovernmental programs and collaborative solutions.

In June 1998, the Office of Intergovernmental Solutions published an in-depth case study report, *The Challenging Road to the Government of the Future: Intergovernmental Management Issues and Directions*. This report identified core issues, challenges, and barriers to intergovernmental management and sets forth lessons learned. From these we are learning what it takes to manage complex intergovernmental programs. There is a need for a new management approach. In intergovernmental programs there are more key players, the decision making process is elusive and complex, and viable funding mechanisms are lacking.

A total of 18 intergovernmental programs were analyzed. The chart on the opposite page summarizes these programs and highlights key observations. Detailed case studies are provided in this report in the sections that address Federal and State programs.

Keys to Management Success

- Build partnerships based on similar needs and a shared set of common values.
- Keep the focus on integrated government functions.
- Establish partnerships early on and get key players involved.
- Ensure that, collectively, partners have the authority, responsibility, and resources to conduct the initiative.
- Established systematic funding methods with incentives.

State and Local Government Experiences

Intergovernmental Program	*Observations*
American Association of State Highway and Transportation Officials	Leadership is key to program success.
Center for Technology in Government, New York State	Partnerships reduce risk.
Bureau of Motor Vehicles, Pennsylvania	Partnerships are the single most important factor in program success.
Digitization of State Maps, Florida	Joint funding makes a project successful.
Criminal Justice Information System, North Carolina	Establishing partnerships early is a key to success.
State Information Technology Consortium	Early support is vital to successful program start-up.
Automated Geographic Reference Center, Utah	Memorandum of Understanding crystallizes interest.
Library Network Initiative, Utah	Communication is fundamental to initiative.

Federal-level Government Experiences

Intergovernmental Program	*Observations*
Standards Committee X12 Program for Electronic Data Interchange, GSA	Common needs, values drive successful standards-making process.
Sale of U.S. Savings Bonds, U.S. Treasury	Partnerships and management commitment are vital to technology project success.
Digital Libraries Initiative, National Science Foundation	Foundations for an intergovernmental model include a "bottom-up" approach, cooperation, and thorough review process.
Benefits Security Card Initiative, U.S. Treasury	Political leadership provides vision for Federal-State partnerships.
Integrated Automated Fingerprint Identification System, Federal Bureau of Investigation	National standards are a key factor in program success.
Great Lakes Ecological Assessment, U.S. Department of Interior	Interagency approach is credited for project success.
National Crime Information Center, Federal Bureau of Investigation	Steering committee provides key to program success.
Technology Acquisition and Assessment Center, National Institutes of Health	NIH program streamlines acquisition of IT products and services.
Simplified Tax and Wage Reporting System	"One-stop" services for customers face a number of challenges.
U.S. Blue Pages Project, General Services Administration	Lofty project goals encourage participants to work together.

Partnerships

Successful intergovernmental management involves governments working with other governments, ordinarily through a formal, collaborative agreement. One of the major themes emerging from the case studies is the significance of the partnership arrangements. Success depends on participants sharing a set of common visions and values, speaking the same language, and working together under some sort of formal agreement.

A shared, common need, such as "fighting crime" often preceded the development of a common vision. Project participants recognized that complex problems were not confined to artificial geographical or political boundaries. They recognized that the solutions to these complex problems required the joint efforts of many levels of government. Often, potential intergovernmental partners have dealt with similar issues and have informally cooperated with each other.

Intergovernmental relationships need structure early on to resolve issues of policy- making, funding, and staffing. Therefore, an approach to establishing partnerships is fundamental. Experiences in building the North Carolina Criminal Justice Information Network indicate that success was due to the early establishment of relationships among participating agencies, resulting in a sense of solidarity and shared goals right from the beginning of the project.

Successful management approaches place emphasis on the common purpose of the intergovernmental program by focusing on integrated government functions. Organizational identity should be avoided, or significantly downplayed. Intergovernmental programs provide the resources, authority, and responsibility to solve a problem that a single level of government couldn't. The areas of common concern and shared needs should be documented in terms that everyone can understand.

In some cases, intergovernmental programs combine a number of projects. An example of this is the Digital Libraries Initiative sponsored by the National Science Foundation. Six different research projects, aimed at developing new technologies, were funded. In this instance, it was vital to manage individual projects as a single effort to minimize competition and maximize cross-project collaboration.

Memoranda of understanding can be used to document shared needs and understanding. They can define responsibility, articulate who is doing what, and specify funding arrangements. As in the case of the Federal Government's Digital Libraries Initiative, intergovernmental programs can combine individual projects, minimize competition among them, and maximize cross-project collaboration.

Participation in an intergovernmental initiative should be as easy and convenient as possible. Participants are often volunteers, and their intergovernmental duties go beyond what is required in their current jobs. If participation in the intergovernmental initiative becomes too onerous, volunteers will withdraw their support.

Intergovernmental programs, by their very nature, necessitate collaboration among partners. No one organization has the responsibility, authority, or resources to go it alone and no project would succeed with only one or two partners acting alone.

Team recognition is important, but the role and contribution of each participant should be publicly recognized. An example of this recognition is the "Hammer Award" often given to intergovernmental project teams. Hammer Awards are presented to teams of Federal, State, and local government employees who have made significant contributions in support of reinventing government. The award consists of a $6.00 hammer, a ribbon, and a note from Vice President Gore. More than 1,000 Hammer Awards have been presented to teams and their individual team members.

Intergovernmental partnerships must also be real, not perfunctory. When partnerships are established, you must be willing to listen to what the partners have to say and to involve them in the decision making process. Participants develop a sense of ownership in the program when they are directly involved in its design and implementation. However, the credibility of the effort is undermined if the suggestions and inputs of the partners are ignored. Furthermore, you must guard against a "big and little" dichotomy. Even when partnership responsibilities and the scope of influence differ, partners need to listen to and respect each other.

Federal-State initiatives are often led by Federal agencies but require State implementation. However, all States may not be technically ready at the same time to implement a program or they may not share the same visions

or needs. In this situation, trying to get all States to participate simultaneously is futile. A better approach is to select one or two States to participate in the project and let them lead the way for their sister States.

Communications

One of the most important management techniques for ensuring success of an intergovernmental program is communications among all involved parties in terms that everyone can understand. Observations from the case studies follow:

- Success depends on open communications between all involved parties, including periodic, face-to-face meetings.
- With a variety of players, schedules, and operating styles involved, clear and frequent communication is essential to the creation and execution of a well-understood plan of action.
- Applicability of policy documents and acquisition regulations must be specified when governmental boundaries are crossed.
- A participatory, consensus-based management approach is effective in keeping communications open.
- The key to project success is to gain local support of as many people as possible. Holding initial face-to-face meetings helps to capture that support.

Leadership and Vision

Closely linked with partnerships and communication is the need for leadership and a common vision. An example of this is the success of the Benefit Security Card Pilot Project. Vice President Gore's 1993 National Performance Review (NPR) Report called for the delivery of benefits to citizens using a single card. That one card would be user friendly and provide unified benefits from Federal and State governments.

The Benefit Security Card pilot project with the Southern Alliance of States (SAS) tested a program to deliver benefits to recipients. The SAS project is the first combined Federal/State project providing single card benefit access for clients. The pilot involved partnerships among 8 States and the Federal Government. The SAS States include Alabama, Arkansas, Florida, Georgia, Kentucky, Missouri, North Carolina, and Tennessee. Federal agency participation includes the Department of Agriculture, Department of Health and Human Services, Social Security Administration, and the Department of Treasury's Financial Management Service (FMS). The pilot required the smooth consolidation of multiple processes. Leadership was critical across the eight States. However, the success of the project is attributed to NPR vision. This vision provided a common goal, encouraged participants to work together, and was the driving force to creatively address and resolve multi-tiered stakeholder interests.

Leadership can originate from existing organizations that are participating in the program or from within the intergovernmental program itself. In the later case, a formal organization, such as a steering group, must be constructed. In the case of FBI's National Crime Information Center, the Advisory Policy Board was established. The Board represents each level of government and acts as a steering committee and policy-making body. Additionally, the Board and its structure have consistently received the support of the Director of the FBI and the Attorney General.

Another factor common to successful intergovernmental projects is that of high-level management commitment. The North Carolina Legislature supported the Criminal Justice Information Network, and this support helped obtain needed funding. High-level management visibility dramatically increased the awareness of geographic information systems technology in Utah and helped ensure the success of Utah's Automated Geographic Reference Center initiative. In the case of the Federal program to sell U. S. Savings Bonds over the Internet, this involved "high-level management commitment that helped to work through problems that are inevitable when dealing with a 'cutting-edge' technology project."

Vision is important. The Blue Pages Project manager stated that "... the single most important factor behind the ability of the participants to work together is the lofty goal of the project." It was this vision that helped project participants to work together "on something with real, tangible results — a project where you can turn to the government listings in a telephone directory and say, "I did this!" "And, it is truly a service to the public." A shared, common vision also helps management. From the Federal government's Digital Libraries Initiative comes this insight, "Program managers believed strongly in the values and goals of the initiative and acted with considerable independence in implementing and executing the program."

Summary

Studies by the Office of Intergovernmental Solutions and the Intergovernmental Advisory Board have identified guidelines essential to successful intergovernmental management. In this study, we have determined that the foundations for an intergovernmental management model are firmly grounded in what we already know about program management. A new approach, however, is required — one that stresses partnerships, communications, and leadership. Key players must be identified early on, the partnership arrangement must be documented, and communications must be kept open and continuously encouraged throughout the program.

Case Studies

Intergovernmental Program Management at the State and Local Levels

EIGHT INTERGOVERNMENTAL PROGRAMS were reviewed. Three of the programs, the American Association of State Highway and Transportation Officials (AASHTO), the State Information Technology Consortium (SITC), and the University of Albany's Center for Technology in Government (CTG) illustrate examples of intergovernmental programs concerned with State issues but not managed by State agencies.

AASHTO is an example of a 12-year cooperative software development program. AASHTO provides software solutions for a community of users, State transportation officials, who have similar needs for the same types of information systems. SITC is a nonprofit consortium to serve the National Association of State Information Technology Executives (NASIRE). SITC is a newly created intergovernmental program, and "lessons learned" from this case study address program start-up.

CTG was created by New York State to let public agencies test new information technology ideas in a low-cost, low risk setting. CTG has had over 50 high-tech companies, more than 100 State government agencies and local governments, and more than a dozen academic researches participating in its research programs. The Center works with government, corporate, and academic partners to reduce the risk of IT innovation by helping agencies assess the combination of policy, management, and technology factors that spell the difference between success and failure

The other five intergovernmental case studies are examples of initiatives in which State governments manage the programs. The following chart briefly summarizes these programs.

State	Name	Partnerships and Funding	Functional Area
Commonwealth of Pennsylvania	Emission Management Information System (EMIS)	Complex program involving the Federal Government, State agencies, governors, automobile dealers, special interest groups, and the private sector. A private sector contractor developed EMIS.	Transportation and environment
Florida	Digitization of statewide base maps.	Partners included a number of State agencies. Funding came from several State agencies and from a Federal grant from the U.S. Geological Survey.	Environment, natural resources, transportation
North Carolina	Criminal Justice Information Network (CJIN)	Partners include State agencies, local governments, and the private sector. Funding was provided through State and Federal appropriations.	Law enforcement, criminal justice

State	Name	Partnerships and Funding	Functional Area
Utah	Utah Digital Spatial Data Sharing and Integration Project	Partners include multiple Federal and State agencies. No new funding was needed to implement the agreement.	Environment, land management, natural resources
Utah	Utah Library Network	Partners include the State Library Division, State Office of Education, Utah Academic Library Consortium, and local governments. Funding was from State and local governments and from State connectivity grants.	Education

BEFORE WE CONCLUDE THIS SECTION OF THE REPORT, it is useful to review some "lessons learned" from the State perspective.

There are clear benefits to intergovernmental programs. Intergovernmental program management is economical, and participants often share the costs and risks. States participating in AASHTO's cooperative software development program did so because of the economies of sharing. The incentive to participate in Florida's effort to digitize State maps was to save money. North Carolina's CJIN effort operated under a concept of shared resources that resulted in a pooling of equipment and staff. Thus, no individual agency had to incur significant costs. The incentive for participation in the State of Utah's Digital Spatial Data Sharing and Integration Project is to get "better data at less cost per agency. The collaborative process ... achieves more efficient and economic operations than what is currently in place and creates an environment where more is accomplished with no new or additional costs."

Intergovernmental programs also improve the delivery of public services. Pennsylvania's EMIS allows statewide emission facilities and State agencies to instantly access inspection-related data and emission reports. Digitization of geographic information provides a clear benefit to the citizen, and public schools and libraries have greater access to services and information.

Communication is critical when there are so many players involved. States found that it was important to spend some time formulating the partnership relationship, defining goals, and building a shared vision among participants. It was advantageous to speak with one voice, especially when dealing with the Federal Government.

1 Leadership Makes Cooperative Software Development Program Successful

THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), through its cooperative software development program, provides its member agencies with a cost-effective alternative for the development and support of automated software management solutions for a wide variety of transportation infrastructure design, construction, and management processes. AASHTO represents a community of users and agencies that have very similar needs for systems.

Currently 45 State government departments are members. Over 100 volunteer information technology and business experts from member departments are involved in managing the effort.

Basically, AASHTO develops systems that are identified by participating States as high-priority projects. AASHTO represents a community of users and agencies that have very similar needs for systems. It is a pooled, funded effort that reduces single agency risk and financial obligation. In participating States, the economics of sharing systems development has overcome any tendency to develop systems separately. States jointly participate in the planning and design of systems and reap the financial benefits of this shared development. The annual membership fee is $33,708. Each participant in the cooperative software program receives the full benefits of the work effort (i.e., developing a software package) for 5% of the cost.

Revenues for the Cooperative Software Development Program have exceeded $10 million for two years. Revenue is derived in two categories, license revenue and project revenue.

The success of the organization can be attributed to (1) development of a workable and financially attractive product, and (2) perseverance. The leaders knew that in a homogeneous organization such as AASHTO, there must be opportunities for shared development, and they stuck to their vision.

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Management Tip

- There is no substitute for developing a workable and financially attractive product. Many organizations begin with noble goals but die because they do not actually deliver a product.

Partnerships Reduce the Risk of IT Innovation

2

RAPIDLY EVOLVING COMPUTING AND COMMUNICATIONS TOOLS offer real promise to governments seeking to improve responsiveness, accountability, and productivity. Unfortunately, many new information technology applications run a high risk of failure. New York State created the Center for Technology in Government (CTG) in 1993 to help deal with this dilemma. The Center works with government, corporate, and academic partners to reduce the risks of IT innovation by helping agencies assess the combination of policy, management, and technology factors that spell the difference between success and failure.

An *Innovations in American Government* Award winner, CTG is located at the University at Albany/State University of New York. Its program allows public agencies to test new ideas in a low-cost, low-risk environment. Agency staff work directly with university and corporate partners to define problems, design processes, and build and evaluate prototype systems. As each project unfolds, CTG works to transfer knowledge to future users through publications, conferences, and education programs. CTG's funding includes an annual State appropriation of about $780,000, research grants which currently range from $100,000 to $400,000, and the value of in-kind contributions from corporate, agency, and university partners.

Since its inception, the Center has conducted more than a dozen competitively selected projects whose practical results include reports, guidelines, handbooks, and prototype systems. Early projects focused on the needs of a single agency such as the New York State Office of Mental Health. In more recent projects, groups of agencies have worked together with other partners to tackle issues, such as use of the World Wide Web, that are common to many public organizations. Regardless of its topic or size, each project has certain important characteristics: it addresses a mission-critical issue with high information content and it has high learning value because it represent a "class" of problems encountered elsewhere in government. For example, the emergency psychiatric decision support project addressed a critical issue in mental health services, relied on the collection and interpretation of detailed clinical information, and taught some important lessons about the interaction between computer applications and expert judgment and about decision making under crisis conditions.

All of the Center's projects are carried out through partnerships among government agencies, technology corporations, and university faculty and students. To date, 50 high-tech companies, more than 100 State government agencies and local governments, and more than a dozen academic researchers have participated. Their combined resources have tripled the value of the Center's direct State funding.

Government partners seek innovative applications of technology to improve public services and government operations. Business partners contribute emerging and State-of-the-art information technologies and services. University partners bring a wide range of expertise in a variety of fields including information science, public affairs, business administration, and computer science

CTG's role in the partnership starts with the project selection process (which includes theme-setting workshops and both staff and peer reviews of project proposals). Once projects are under way, CTG staff provide project management, process analysis, group facilitation, and evaluation expertise. The Center's services also include establishment and management of corporate relations, links to university resources, formal documentation of project

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Management Tips

- Limit the scope of the project and the terms of engagement to something of real value to all concerned.
- Build understanding and trust through coordination and communication.
- Refine problem-solving skills.
- Produce a series of results throughout the project.
- Publicly recognize all partners.

results, and an ongoing program of information dissemination and management education based on project findings.

Project Management Issues

Partnership projects demand a special kind of management approach. Although each partner stands to benefit from participation, expectations, organizational cultures, and access to resources often vary widely. In addition, each project team is an "all volunteer army"—no member is compelled to join or to stay engaged for the duration. Partners also have a variety of motives: agencies want their problems to be solved as quickly, completely, and inexpensively as possible; corporate partners, who are donating their time and expertise, want to demonstrate their capabilities to a broad audience in hopes of generating future sales; faculty members look for situations in which their own academic research interests can be pursued. Since their motives are different, the partners also define success differently. It takes a considerable amount of time, negotiation, and communication to turn this collection of different needs and goals into a shared vision for the project.

Lessons for Managing Partnership Projects

Over the last five years, several lessons have emerged that help deal with these unavoidable issues.

Limit the scope of the project and the terms of engagement to something of real value to all concerned. This means agencies need to scale back their common desire for a fully functioning production-quality system to acceptance of a well-defined and evaluated prototype. It usually means waiting to engage corporate partners until a considerable amount of problem analysis has been conducted and likely technologies have been identified. This brings technology companies to the table at the point where they are more certain that their involvement can be well-focused and their commitment of time, products, and people will be more predictable. Students are often engaged from beginning to end, but faculty involvement varies: some become engaged in an ongoing thread of research, while others may limit their participation to those activities that demand a special kind of knowledge or expertise.

Coordination and communication build both understanding and trust. With the variety of players, schedules, and operating styles involved, clear and frequent communication is essential to the creation and execution of a well-understood plan of action. Each partner has a strong voice in how the project is defined and executed, and all understand that changes are inevitable due to new insights and changing demands on their resources.

Troubleshooting and problem-solving skills need to be highly refined. Since no partner is required to participate, early warnings of problems or miscues need to picked up and resolved with dispatch. When problems do arise, only win-win solutions are acceptable.

Produce a series of results throughout the project. Everyone is eager to see results, so it is wise to share what you learn as you go along. Don't wait until the very end of the project to issue reports, share useful tips, or demonstrate practical results.

Publicly recognize all partners. Since no project would succeed with only one partner acting alone, every project includes a plan to recognize the contribution of each participant. All are invited to play a role in public presentations, and all are identified and their roles are acknowledged in publications and on the project Web site.

Remember that the overall goal is experimentation: therefore, you can't fail if you learn something. This definition of success is crucial to CTG's program. Since the overall goal is to reduce the risk of innovation, participants often learn what does not work as well as what does work. Both kinds of learning spell success.

3 Partnerships are the Single Most Important Factor in Program Success

THE COMMONWEALTH OF PENNSYLVANIA implemented a completely decentralized enhanced vehicle emissions program in the nine most populated counties on October 1, 1997. Approximately 3.4 million vehicles are affected. Nearly 2,800 private garages are certified to conduct inspections in the program. To date, over 3 million tests have been completed. The program may potentially be expanded to other counties in the future. The program is most effective in identifying high-polluting vehicles, especially in the five-county Philadelphia area that uses a loaded-mode test (i.e. dynamometer).

The Commonwealth of Pennsylvania contracted with a Program Manager (MCI Telecommunications) to develop an Emission Management Information System (EMIS) to provide support to the State Motor Vehicle Agency and the environmental protection departments, U. S. Environment Protection Agency, state governors, and automobile dealer and service associations. The Program Manager is responsible for total program management, including all data collecting, reporting, and program oversight (aggressive audit program). Ultimate responsibility and authority rests with the Pennsylvania Department of Transportation (PennDOT), Vehicle Inspection Division.

EMIS enables emission inspection facilities and State government agencies to instantly access vital inspection-related data and standardized emission reports. An electronic search matches a vehicle to be inspected to its record maintained in a centralized Vehicle Information database (VID). After a vehicle passes or fails inspection, the data is automatically entered into the vehicle profile in the VID.

PennDOT worked for over a year with a workgroup representing the inspection and repair industry, the public, and special interests to help design the program. Stakeholder groups representing a broad coalition of government, private business, and special interest groups identified implementation strategies. Buy-in was assured by virtue of the fact that affected parties were directly involved in choosing the strategy and designing the program.

The program is unique in that it is a totally private-sector based program. The Commonwealth of Pennsylvania neither subsidized nor receives revenue from the program except for normal sales tax. The cost of the test varies according to market forces and is not controlled by government. The Commonwealth assumed that the private sector would not invest in the program if the government controlled fees.

There were few intergovernmental issues among State agencies. Several program design issues had to be negotiated with the U.S. EPA during the design phase. Participants worked well together and endorsed the process primarily because their voices were truly heard and their suggestions, for the most part, were incorporated into the design.

Making this partnership real rather than perfunctory (which is typically the reputation of the government) was the single most important factor in the program's successful implementation. Participants sensed ownership of the program because, in a major way, it reflected their design and their input.

Our best advice is to get those directly affected by a program involved early in the selection and design. You must be willing to use that partnership. Often such attempts fail because government creates the impression of partnering, but then ignores input and suggestions and proceeds with impunity, undermining the entire credibility of the effort.

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Management Tips

- Make partnerships real rather than perfunctory.
- Get those directly affected by the program involved early in the selection and design process.

4 Joint Funding Makes State Mapping Project A Success

FLORIDA HAS FOR SEVERAL YEARS pursued a geographic information initiative with participation from Federal, State, and local government agencies. The goal was to jointly develop and fund digitization of a statewide base map using the U.S. Geological Survey's 1:24,000 quad maps. Through this joint initiative, the State was able to save an estimated $12 million on a $3.5 million investment.

Partners included the Florida Department of Environmental Regulation, the Florida Department of Natural Resources (now combined into the Department of Environmental Protection), the Florida Department of Transportation, Florida State University, the U.S. Geological Survey (USGS), and several Water Management Districts. The group was brought together by the Florida Growth Management Data Network Coordinating Council (later renamed the Geographic Information Board) which also coordinated the budget. USGS provided matching Federal funds. The incentive was rather straightforward: to save money on developing extremely expensive statewide base maps.

Several management techniques helped to make this intergovernmental project a success and may be useful in similar initiatives. From the State perspective:

- Make sure that you identify an area of common concern and document that shared need in terms that everyone can understand. In this project, memoranda of understanding articulated who is doing what and who is paying for what.
- Represent State interest with a common voice in negotiating with the Federal Government.
- Establish and staff a central coordinating office to pursue common goals.
- Make sure that staff support is provided early in the project.
- Provide State funding directly to the coordinating council and not to individual agencies. Avoid budget battles and turf wars by creating a separate budget for the joint enterprise, and make the interagency group responsible for the budget. If the money goes to the joint coordinating council, you will get proper representation and effort on the council. If the money goes to individual agency budgets, you will have to fight to coordinate the effort.

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Management Tips

- Identify areas of common concern.
- Document shared needs.
- Provide staff support early on.
- Provide a separate budget for the joint enterprise and make an interagency group responsible for the budget.

5 Establishing Partnerships Early Is Key to Program Success

THE NORTH CAROLINA CRIMINAL JUSTICE INFORMATION NETWORK (CJIN) permits State and local criminal justice agencies to share information. A CJIN Study Committee was created during the 1994 Special Crime Session of the North Carolina General Assembly and was tasked to identify strategies for development and implementation of CJIN. A consulting firm was contracted to perform this study, which was presented to the committee in April 1995. Its objective was "to identify alternatives for development of a statewide criminal justice information network that will enable a properly authorized user to readily access and effectively use information regardless of its location in national, State, and local databases." Components of the network include Statewide Automated Fingerprint Identification System (SAFIS), Data Sharing Standards Development, a Statewide Magistrate System, Mobile Data Network, Courtroom Automation, and Juvenile Justice Automation.

In 1996, the North Carolina General Assembly enacted legislation to establish the CJIN Governing Board which oversees the progress of the initiative. The board consists of representatives of state agencies, local governments, and the private sector. Secretary of Crime Control and Public Safety Richard Moore, appointed by the Governor, serves as Chairman. State Bureau of Investigation Assistant Director Ronald Hawley was appointed by the Attorney General and is Vice-Chair.

The board has recommended additional appointments that were presented to the 1998 General Assembly. State agencies with major involvement in the initiative are the Department of Crime Control and Public Safety, the Department of Justice, the Department of Correction, the Administrative Office of the Courts, the Division of Motor Vehicles, and the State Information Processing Service.

Because the long-term benefits of the network are so obvious, the agencies involved have been supportive and most willing to participate. No single agency has incurred significant costs by participating since staff and equipment have been pooled. In May 1998, Crime Control and Public Safety funded CJIN's first staff position, an administrative assistant to coordinate day-to-day activities. A project coordinator position will be funded in the current session of the General Assembly and should be on staff sometime in early 1999.

CJIN has enjoyed strong funding support from both State and Federal legislators. Grant money has also been utilized for many of the significant associated costs. To date, a total of $24,963,600.00 has been funded through State and Federal appropriations and grant money. Educating legislators and other key supporters on the benefits and need for the network has garnered needed funded. A series of regional meetings helped to involve local agencies in the concept and long-term goal of achieving an integrated statewide system.

Three factors that worked well were:

1) development of a comprehensive plan with a phased approach, providing a logical and cost-effective starting point;

2) early establishment of relationships among the participating agencies, producing a sense of solidarity; and

3) involvement of the State Legislature at every step.

The groundwork has been laid to familiarize and update the General Assembly, which has helped immeasurably with funding efforts.

An approach of establishing partnerships early on and the cooperation of the major agencies should be part of any model for development of similar initiatives. Once these key players are on board, it becomes possible to present a united effort to involve county and local agencies. It has also proven beneficial in terms of obtaining funding at both the State and Federal level.

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Management Tips

- Market effort early on, including the involvement of the State Information Processing Services.
- Have staff in place, even if it would have had to be done through grant funding or time limited positions.
- Establish a convenient method for all participants to purchase standardized equipment.

6 Early Support Is Vital to Successful Start-up

IN 1997, THE EXECUTIVE COMMITTEE of the National Association of State Information Executives (NASIRE) formed a nonprofit State Information Technology Consortium (SITC) to serve as its "technical arm" to foster greater collaboration among States in information technology. SITC addresses IT-related challenges posed by the rapid devolution of Federal programs to the State level. Each State has an equal voice in the direction and planning of SITC. Initially, NASIRE assisted in shaping the agenda towards risk management and Year 2000 conversion issues. In the future, SITC member States will increasingly determine program activities of greatest value to themselves. SITC also proposes new initiatives to its members over time, increasing member leverage of their annual dues. A Board of Directors appointed by NASIRE provides executive guidance.

Ten States and the District of Columbia are currently members of SITC. State members include Alabama, California, Georgia, Kansas, Kentucky, Missouri, South Dakota, Virginia, Washington, and Wisconsin. Ten more States have indicated an interest to join by the end of 1998.

SITC is fully dependent on membership fees. States were asked to provide an annual membership fee of $5,000 (acting as "host state," the Commonwealth of Virginia invested start-up funds of $150,000 to launch SITC). Upon paying their annual dues, each member state receives certain benefits, including Internet access to reports and templates and a two-day Risk Management workshop.

Beyond these benefits that accrue directly from annual dues, a member State can contract with SITC for additional technical support as needed (e.g., to develop requirements specifications for a new system; to document business processes so that they are reflected in the requirements; or to request training in specific technical areas). Currently, SITC provides 20 different technology courses to the State IT community. The most salient benefit from SITC membership is the ability to communicate and share "lessons learned" with peers in other State IT organizations.

When embarking on an intergovernmental effort, we found that sponsorship from existing organizations whose missions can subsume that of the new initiative (in this case, from Virginia and NASIRE) is essential. In addition to the sponsorship issue, securing an initial core of committed States has been the most instrumental factor in the success of the SITC. This commitment must include both the time and labor needed to develop an initial technical program and "grow" the organization.

It is SITC's experience that such intergovernmental efforts require hard, focused work to secure a successful launch. Additionally, lessons learned from initial consulting engagements must be quickly and effectively fed into future program planning efforts. Even when the mission is unique and worthy of support, new initiatives compete for time and resources of key executives. The early support of highly respected leaders is vital to the successful start-up of an initiative.

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Management Tips

- Plan accordingly. Funding, making decisions, securing participation in the project, and educating participants takes time.
- Recruiting participants is difficult. Even if there is a strong interest to join and receive benefits from a specific program, new initiatives compete for time and resources.

MOU Establishes Federal-State Data Project

ON OCTOBER 15, 1997, Utah's Governor Michael Leavitt, the Utah Association of Soil Conservation Districts, and the State Regional Directors of several Federal agencies (including the Bureau of Land Management, U. S. Geological Survey, Forest Service, National Park Service, Fish and Wildlife Service, Natural Resources Conservation Service, Environmental Protection Agency, Army Corps of Engineers, and Bureau of Reclamation) signed a Memorandum of Understanding for the Utah Digital Spatial Data Sharing and Integration Project. Recognizing that Federal, State, and sub-State agencies need and use similar data, the agreement provides a mechanism to cooperatively create and share impartial and credible digital spatial data. The project will generate standardized data, reducing duplication in data development and promoting data exchange and communication among Utah agencies.

Significant aspects of the agreement include:

1) Creation of agency specific data catalogs, all connected to the State Geographic Information Database.

2) Adherence to the Federal Geographic Data Committee's Metadata Content Standard.

3) Prioritization of 15 themes of data (geodetic control, digital ortho-imagery, elevation, transportation, hydrography, government units and boundaries, cadastral reference system and administrative ownership, demographics, wetlands, geology, wildlife habitat, climate, ground cover, land use, and soils) to create, integrate, and distribute through the State Geographic Information Database.

The agreement authorizes agency personnel to participate in cooperative data efforts. It expands existing regional agreements or agency specific agreements to a statewide level for the purpose of data coordination and sharing. As Governor Leavitt remarked at the signing ceremony, "It is a victory for common sense."

The agreement will be implemented with no new funding. The State of Utah and participating Federal agencies recognized that they are all currently expending resources to collect, maintain, and distribute digital geographic information. The incentive for participation is better data at less cost per agency. The collaborative process created through this agreement achieves more efficient and economic operations than what is currently in place and creates an environment where more is accomplished with no new or additional costs.

Several factors contributed to the success of this project. One is that the State of Utah has been involved with national activities led by the Federal Geographic Data Committee for several years and was keenly aware of initiatives that culminated in this project. Another factor is that State, Federal, and local agencies in Utah are all dealing with similar land and resource management issues and have recognized and created opportunities to cooperate on data issues that help each other meet specific responsibilities. Finally, this agreement involved the highest levels of management, dramatically increasing the awareness of geographic information systems technology.

The agreement was recognized as a model approach for other governments by the National Academy of Public Administration in their recent report "Geographic Information for the 21st Century." The report quoted John Moeller, Staff Director of the Federal Geographic Data Committee, who said that "the MOU is the 'first of a kind' signed at such a high policy-level among so many agencies and a Governor, and was encouraged by Interior Secretary Bruce Babbitt and other members of the FGDC Steering Committee." The MOU establishes support from agency leaders and provides a mechanism to cooperatively create and share impartial and credible digital spatial data.

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Management Tips

- The pomp and circumstance of a formal signing ceremony crystallizes interest in a project.
- Participation at the highest levels increases awareness.

8 Communications, Connectivity, Grants, and Convenience Spell Success for Utah Library Network

THE UTAH LIBRARY NETWORK initiative links Utah's public (city and county) libraries to the Internet via the Utah Education Network (UEN), the State government's Information Technology Service's wide-area network, and private Internet service providers. As a result of these partnerships, local governments are reaping the benefits of contracts negotiated by representatives of the State Library Division, the Utah State Office of Education, the Utah Academic Library Consortium (UALC), and UEN for value-added commercial databases available on the Internet.

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Management Tips

- Hold initial face-to-face meetings.
- Establish a local technical support person.
- Provide well-timed initial training and comprehensive ongoing training.
- Carefully select initial sites for implementation.
- Make participation in the initiative as convenient as possible.

The Utah Library Network initiative has taken a broadly based, diverse approach to expanding network services. In addition to providing grants to city and county libraries for connectivity, the State Library has provided an infrastructure in the form of negotiating favorable terms and paying for connect fees to the Utah Education Networkís backbone. In cooperation with its partners in the public schools and higher education, the Utah State Library Division has built and maintains PIONEER, Utah's on-line library.

PIONEER (http://pioneer-library.org) hosts links to the Information Access Company's SearchBank of full-text magazines and journals in five databases, two statewide newspapers, and an encyclopedia (contracts for additional full-text databases are now being negotiated). All of Utah's public school and academic libraries, as well as all State government agencies, are eligible users of these services. The State Library also hosts E-mail for member libraries, administers a listserv for communication exchange, and provides ongoing training in the use of the Internet and PIONEER's licensed databases.

The Utah Library Network's one ever-present partner has been the Utah State Library Division, with 95 city and county government entities joining and remaining partners over the first 5 years. But over the Network's history, it has also had a series of "floating" partnerships with such entities as the University of Utah Computing Center, the Utah Education Network, Smart Utah, and Microsoft. Partnerships have been formed and dissolved based on changing needs.

The initial partnership between the State Library Division and the local governments was formed over 40 years ago with the creation of the Utah State Library Commission (former name of the Utah State Library Division). The Commission set the stage for the recent Utah Library Network initiative by establishing a cooperative relationship between these vertical levels of government and providing funding incentives from the State government to local government.

Partnerships were formed because the groups involved shared common goals and understood the benefits of coordinating their efforts. In some cases, the State Library Division solicited a partnership; e.g., a partnership with Microsoft to develop Internet connectivity for "under-served" populations. Partnerships were dissolved when it was determined that a different entity could provide services more efficiently (e.g., the State of Utah Division of Information Technology Services left the partnership because all parties agreed that coordinating all connectivity installations through UEN would be a more efficient use of taxpayer dollars).

The State Library Division obtained initial one-time funding and now has a base budget from the Utah State Legislature for connectivity grants, annual network access fees, and database licenses. The connectivity grants have provided a powerful incentive for the local governments to support the connectivity initiative. Local match of funds is not required by the State Library Division as a qualification for receiving these grants, but local governments have, in most cases, provided equipment as well as ongoing funding for monthly circuit charges. Some local

governments have also provided the libraries with technical support for this initiative.

After assisting many sites with connectivity grants, the State Library learned the importance of holding an initial face-to-face meeting with the local librarian, and, if possible, a library board representative, a representative of local government, and a local technical-support person. This meeting clarifies the process, establishes expectations, and develops personal relationships that are helpful for future collaboration. When these meetings were not held, the process of developing a grant and establishing connectivity took longer and was more confusing for the local government people.

A closely allied lesson learned was the importance of designating a local technical support person on whom the local library could depend. When this was not stressed and required, the local library called upon the State Library Division, which has very limited technical support resources, for assistance. The Utah Library Network can only be strong when the member libraries have functional connectivity, so establishing dependable local support ensures the existence of the Network.

Finally, the State Library Division learned the importance of well-timed initial training and comprehensive ongoing training. Initial training should take place as close to the arrival of equipment and establishment of connectivity as possible. Also, content-oriented follow-up training for librarians increase the likelihood that newly added PIONEER database resources are utilized effectively.

Careful selection of the initial sites for implementation of the network was crucial to the success of this initiative. Sites were chosen for early implementation because they were located near readily available technical support and they were very enthusiastic about participation. This translated into librarians ready to learn how to use the new resources and to teach their patrons to use them effectively. They had community support, and word of their success spread to neighboring communities.

Communication among local libraries and between them and the State Library Division was important to the success of this initiative. Communication was encouraged by holding quarterly business meetings for libraries and establishing an E-mail based "listserv." The latter has proven even more effective than the face-to-face meetings over time because participant libraries that joined later are located in geographically remote areas. By means of the listserv, librarians can exchange ideas on the Utah Library Network and library practices, and the State Library can solicit input and distribute information.

Finally, the likelihood of success was improved by making participation in the initiative as convenient as possible. This has taken the form of providing liaison services between the local public libraries and those responsible for providing connectivity (i.e. Utah Education Network) and paying for all "connect" charges to that network.

Case Studies

Intergovernmental Program Management at the Federal Level

TEN FEDERAL PROGRAMS WERE REVIEWED in this document. Most of the programs were chaired by Federal agencies partnering with other Federal agencies and with States. Academia and the private sector often participated. The case study on the standards-making process provides a good example of the voluntary process that is the hallmark of many intergovernmental programs. Volunteers develop standards that have a profound impact on the way government and industry conduct business. The standards-making process success is based, in part, upon a shared set of common values that enable participants to work together effectively. This theme is repeated again and again in the case studies and is one of the report's principal findings.

Two case studies come from the Federal Bureau of Investigation. These programs succeeded due to the high-level management support afforded to each program. The presence of this kind of high-level support is another major finding of this report and reaffirms a fundamental management principle. High-level management support is essential. It keeps communication open, facilitates funding, and provides the vision and leadership required to bring diverse organizations together to achieve a common goal.

A case study that looks at the National Institutes of Health Technology Acquisition and Assessment Center (NITAAC) is included. It provides an example of benefits that can be derived from partnerships, in this case, a partnership between the Federal Government and industry. This program, managed by NIH, makes information technology products and services available to all Federal agencies through a number of contracts. NITAAC partnered with industry during the development of the program to test contract structures and payment strategies. This program streamlines the Federal procurement process while industry saves in bid and proposal costs.

The following chart summarizes each case study.

Lead Federal Agency	Project	Partnerships and Funding	Functional Area
(1) General Services Administration Data Interchange Standards Association, Inc.	Federal EDI Standards Management Coordinating Committee (FESMCC)	X12 standards for electronic data interchange of business transactions. Membership in the committee is voluntary.	National standards
(2) Bureau of Public Debt, Department of Treasury	Savings Bond sales over the Internet	Partnership between the Federal Government and industry.	Electronic Commerce (EC)

Lead Federal Agency	Project	Partnerships and Funding	Functional Area
(3) National Science Foundation	Digital Libraries Initiative	Partnership between three Federal agencies - the National Science Foundation, the Department of Defense Advanced Research Projects Agency, and the National Aeronautics and Space Administration. Other partners include States, private industry, and academia. Funding from the three agencies and various cost- sharing arrangements.	Research and education
(4) Financial Management Service, Department of Treasury	Southern Alliance of States (SAS) Pilot of the Benefit Security Card	Multiple partners including 8 States and 4 Federal agencies.	EC, welfare reform, Electronic Benefits Transfer (EBT)
(5) Federal Bureau of Investigation	Integrated Automated Fingerprint Identification System (IAFIS)	Partnerships with local police departments, State law enforcement agencies, Federal agencies, and the Federal Judiciary. Funding is through the Federal budget process and user fees.	Law enforcement
(6) Forest Service, U.S. Department of Agriculture	Great Lakes Assessment (GLA)	Partnerships with Federal agencies, State governments, and a wide variety of natural resource and academic organizations. Funding was from the National Performance review and the Forest System, USDA.	Natural resources, environment

Lead Federal Agency	Project	Partnerships and Funding	Functional Area
(7) Federal Bureau of Investigation	National Crime Information Center (NCIC) 2000	Partnerships between local, State, and Federal law enforcement organizations. Funding at the Federal level. The FBI provides the hardware and software. System users provide the information. There is no charge to use the system.	Law enforcement
(8) National Institutes of Health	NIH Information Technology Acquisition and Assessment Center (NITAAC)	This is a Federal-level program that provides IT products and services to Federal agencies. NITAAC charges a servicing fee that that is collected by industry and remitted directly to NIH.	Acquisition of IT products and services
(9) Internal Revenue Service	Simplified Tax and Wage Reporting System (STAWRS)	Participants include the Internal Revenue Service, Social Security Administration, Small Business Administration, Office of Management and Budget, all 50 States, and private organizations.	Tax collection
(10) General Services Administration	Blue Pages Project	Public sector representation included most Federal departments and large agencies. Private sector representation included the Yellow Pages Publishers Association and Regional Bell Operating Companies. GSA funds the project.	Access to government programs

Intergovernmental programs at the Federal level tend to be complex, involve many players, and push the capabilities of technology. At times, as in the case of the Savings Bond Project, programs were at the "cutting edge" in their use of information technology. Many were funded at the Federal level, and Federal funds were used to encourage State participation. At the Federal level, intergovernmental programs were undertaken in response to national issues that crossed political and geographical boundaries. National standards were essential to facilitate electronic benefits transfer and the transmission of fingerprint images. Finally, intergovernmental programs are a reflection of our complex society. Today, no one organization can think of everything nor does a single organization have the authority or resources required to resolve all the problems.

Several noteworthy management practices were evident in the case studies. The STAWRS case study tells us to focus on the highest intergovernmental level first, then, involve one or maybe two players at the next lower level. Finally, be realistic and implement the project in small pieces, consisting of a series of small steps that take you to the grand "finale."

1 Common Needs, Values Drive Successful Standards-Making Process

IN 1979, THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) chartered the Accredited Standards Committee (ASC) X12 to develop uniform standards for electronic data interchange of business transactions. The main objective of X12 is to develop standards to facilitate electronic interchange for such common business transactions as order placement and processing, shipping and receiving, invoicing, and payment, as well as special purpose documents such as student loan applications. This voluntary process involves a large number of standards developers who write and maintain several sets of national standards. Each year, many individuals and companies, labor, consumer, and industrial organizations, and Federal and State government agencies voluntarily contribute their knowledge, talent, and effort to standards development.

The family of X12 standards is constantly expanding as a result of the activities of the members of X12 and the standards users. In X12, various subcommittees develop new standards that become recommendations for the full X12 membership. Some of these subcommittees are: Finance, Government, Materials Management, Transportation, Purchasing, Insurance, and Technical Assessment. The full X12 membership must go through a consensus process before a proposed standard or any change to a standard is published as a Draft Standard for Trial Use. After a reasonable trial period, these standards are submitted to ANSI to start the process of consensus, approval, and registration to become American National Standards.

The Data Interchange Standards Association (DISA) is the secretariat for X12. Each year DISA publishes the entire set of X12 standards in draft format in what is known as a version/release. DISA also publishes other documents, such as X12 technical reports and guidelines.

Federal agency representatives have been active members of X12 in an effort to ensure that the Federal Government's interests are considered in the standards development process. Federal requirements in external standards bodies need to be supported, coordinated, and clearly stated if the Federal Government is to adopt and use industry standards successfully.

In 1993, the President, through the National Performance Review, stressed the importance of modernizing various government processes through the use of EDI to replace paper. FIPS 161-2 was drafted. It requires that Federal agencies that use EDI for exchanging business information use the X12, EDIFACT, or HL7 standards. The FIPS also identified the need to establish a committee with staffing from across agencies to support the development and use of Federal implementation conventions.

In order to support the Federal Government's adoption and implementation of these standards, an interagency committee, known as the Federal EDI Standards Management Coordinating Committee (FESMCC) was created. It provides governmentwide support and coordination of implementation conventions required to fulfill Federal agency business requirements. The FESMCC, currently chaired by a GSA representative, provides an annual summary of its activities to the OMB. The National Institute of Standards and Technology (NIST) serves as secretariat for the FESMCC and publishes the draft and approved Federal implementation conventions on an EDI Registry website.

To carry out its objectives, the FESMCC chartered functional workgroups (e.g., Finance, Procurement, Logistics, Communications, Health Care) to provide focal points for the development and maintenance of

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Management Tips

- Shared development results in a better quality product.
- Get many different organizations involved. No one organization can be expected to think of everything.

Federal implementation conventions based on the X12 standards. These workgroups bring together Federal agencies' functional, technical, and management experts who work to develop common implementation conventions that support interoperability between Federal agencies and their trading partners.

Several factors contribute to the success of the standards making process. The participants are volunteers that share a set of common values, believing that shared development results in a better quality product. By getting many different organization involved, no one organization is expected to think of everything. Consequently, there are fewer changes as the standards are refined and implemented. By involving many organizations, the standards become more robust, covering everyone's requirements.

There is also a value in networking and knowledge exchange. Participants come away from the process with ideas that they can apply to their own agencies. Another set of factors influencing the success of X12 is the demand to convert paper processes to electronic coupled with the demand to streamline business processes. Governments are moving away from proprietary standards. They are recognizing the need to implement common standards that make it easier to conduct business with the public and with their private sector trading partners.

The Federal Government has become recognized as a major player in the standards development process. However, like all EDI users, individual Federal departments and agencies may use narrower subsets of the Federal implementation guidelines with their particular trading partners, and thus may create internal groups to identify these needs. These groups may identify requirements based on legal, policy, procedural, or systems requirements.

2 Partnerships, Management Commitment Vital to Cutting-Edge Technology Project

THIS INITIATIVE INVOLVES PARTNERSHIPS between the Federal Government and industry. The Savings Bond Operations Office, Bureau of Public Debt, Department of the Treasury, is preparing to sell savings bonds via the Internet using the Secure Electronic Transactions (SET) protocol. Visa, Mastercard, and others developed this standard to establish a secure method of accepting credit card payments over the Internet. SET is unique because it allows you to authenticate each party in the transaction through the exchange of digital certificates.

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Management Tips

- Due dates are simply targets to shoot for. Many factors are outside your control when you're dealing with new technology, extensive testing requirements, and different versions of software. You have to be flexible enough to handle the continually shifting project.
- Rely on outside help when needed. Don't expect to solve all problems in-house when an outside party may be able to save you a lot of trouble.

The Operations Office is working with government and non-government organizations as part of the U.S. SET pilot. Treasury's Financial Management Service (FMS) is participating in the pilot through its Plastic Card Collection Network (PCCN) to accept credit cards as the payment mechanism. Mellon Bank, one of the network banks participating in the PCCN, is the credit card Acquirer. It will issue SET tools to credit card customers, support SET transactions for them, and perform funds settlement.

MasterCard, through Mellon Bank, is assisting with communications testing to ensure that payments are sent securely from and to each party. MasterCard is also planning a promotional mailing to publicize SET and encourage customer acceptance of this new standard.

A Web site will be publicized, in a promotional mailing, as a place where customers can securely purchase U.S. Savings bonds over the Internet. IBM is participating in the pilot to provide software and "electronic wallets," one of the necessary tools for customers to complete a SET transaction.

Each party is primarily providing its own funding for its part of this project. MasterCard is funding the promotional mailing and incentives package for all pilot merchants (both Government and non-Government).

The following factors helped make the pilot a success:

1) Open communications between all involved parties, including face-to-face meetings when necessary.
2) Access to expert help with quick turnaround to work through system problems and bugs.
3) Commitment to the project at the highest level in the organization helped with working through problems that are inevitable when dealing with a "cutting-edge" technology project.

3 "Bottom-up" Approach, Cooperation, and Thorough Review Process Provide Foundation for Intergovernmental Model

IN 1994, THE NATIONAL SCIENCE FOUNDATION (NSF), the Department of Defense Advanced Research Projects Agency (DARPA), and the National Aeronautics and Space Administration (NASA) funded six research projects aimed at developing new technologies for digital libraries. Research in digital libraries explores the development and use of large-scale globally distributed electronic collections containing text, images, maps, audio recordings, film clips, and combinations of these elements (multimedia). The projects were selected after a national competition. The funding level for this initiative was set at $24.4 million over a four-year period, with individual projects receiving approximately $1 million per year. Awards were made in the form of cooperative agreements.

Each of the six Digital Libraries Initiative (DLI) projects has a research and testbed component and brings together multidisciplinary teams of researchers and users from a lead university with teams from partnering organizations. Each project was required to carry out fundamental research, create a large testbed, work with partners, acquire substantial cost sharing, and demonstrate leadership for the larger community. Partners include major U.S. computer and communications companies, academic institutions at all levels, libraries, publishers and digital content developers, government agencies, professional associations, and other organizations with a stake in large-scale distributed knowledge repositories.

The DLI projects have become highly visible, influential efforts and have assumed a leadership role in the international digital libraries research community. Based on the recognized achievements of DLI, a follow-on program, "Digital Libraries Initiative - Phase 2," was announced in the spring of 1998.

Partnerships

NSF, DARPA, and NASA are sponsoring partners, each having supported basic research in computing and communications. They were among the founding agencies of the Federal High Performance Computing and Communications Initiative (HPCC). Digital Libraries as a broad, newly emerging topical area was of high interest to these agencies. Informal working groups of agency managers were formed and met regularly over a period of time to define programmatic goals and discuss alternative research agendas. These were then the topics of technical workshops funded by the agencies to reconcile them with community values and expectations. Reports emanating from the workshops provided the intellectual content of the program announcements (RFPs).

Once funded, the DLI projects became exceptionally successful in building partnerships with other organizations. Through "performing partnerships," the projects have dramatically increased their scopes and levels of activities, multiplying the number of people actually involved by a factor of five or more over those receiving Federal support via the cooperative agreement. Each partner relationship is unique, differing in degree and in type, changing over time and involving varying levels of interaction.

Funding

Digital Libraries is a highly interdisciplinary topical area extending, in some cases well beyond the missions of the agencies involved. At the same time, digital libraries research is heavily grounded in content, collections, use, and usability. Research products must be tested beyond the laboratory by deploying operational systems containing collections of value to specific user communities. To achieve this end, each DLI project formed partnerships with various organizations - public

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Management Tips

- Broaden program participation and support beyond computing, information and communication researchers. Include scholars and practitioners from many disciplines, including the arts and humanities.
- Promote activities and processes that build new interdisciplinary communities.
- Take steps to move digital libraries testbeds beyond research prototypes. Explore ways to make the research products usable in real world settings.

(other Federal, State and local governments) and private (major technology vendors, publishers, libraries, schools, etc). Taken together, over 80 major partnerships were formed, which provided the projects with substantially more resources, testing environments, and, importantly, fresh perspectives on their activities. Cost sharing of more than 100 percent on the average was reported annually by the DLI projects.

Management Techniques That Worked Well

- ***Manage the individual projects as a single effort.*** This minimized competition among the six projects and maximized cross-project collaboration. DLI became perceived as a program of national and international interest and drew the involvement of researchers, librarians, and other stakeholders from around the globe. All project meetings were held every 6 months, hosted by each site in turn. A total of six were held over the four-year term. Though these meetings were intended just for immediate project staff and agency DLI managers - about 50 people - interest in the program was such that the number of attendees quickly expanded to over 200 per meeting representing almost all sectors in the United States and abroad.
- ***Adopt a participatory, consensus-based management approach.*** Trust among agency program managers, among the DLI project directors and staff, and between projects and agency managers made the program more effective and workable. By adopting a participatory, consensus-based management approach, the program was able to be particularly effective in exploiting aspects of the global information infrastructure revolution that was underway. In many ways, the management culture reflected the positive aspects of the open culture of the Internet.

  As an example of the levels of confidence between managers, by the second year of the initiative, agency managers were giving presentations on behalf of the other agencies. Similarly, project directors were making presentations around the globe and speaking on behalf of the other projects. Projects were posting their future program plans on their Web sites. All of this was seen as a daring and idealistic way of doing business, almost unprecedented in the experience of the agency managers and project leaders.
- ***Make sure project reports are comprehensive and widely disseminated.*** The NSF/DARPA/NASA agency management team agreed in advance on project reporting that would satisfy each agency's needs. The team constructed a four-year reporting schedule and made available a single national Web site on which the projects would place their annual reports, research papers, seminars, workshop reports, conference presentations, and software research products. (http://dli.grainger.uiuc.edu/national.htm)

The initiative benefited from a "bottom-up" approach. It was conceived and planned by program staff at the agencies and not part of a grander scheme imposed from above. As such, the monies invested were from the base budgets of the programs involved (about 15 separate programs from NSF, DARPA, and NASA contributed funds). Program managers believed strongly in the values and goals of the initiative and acted with considerable independence in implementing and executing the program.

The initiative also benefited from the cooperation among the funded projects. Often, the natural course is for projects to become insular and competitive - because they are competing for the same funds.

Finally, the initiative included an exceptionally thorough review process. The original selections were made after a four-stage peer review consisting of mail reviews, panels, and site visits for the highest rated proposals. Project reporting was comprehensive and rigorous: quarterly letter reports, semi-annual research and testbed progress reports, and annual program plans. These were shared and distributed widely. Each project was also site visited prior to major funding increments by site visit teams composed of agency program managers and outside experts.

4 Political Leadership Provides Vision for Federal-State Partnerships

THE ELECTRONIC BENEFITS TRANSFER (EBT) one-card concept began with Vice President Gore's 1993 National Performance Review (NPR) Report. The EBT one-card concept calls for a system that has one user-friendly card with unified delivery of government funded benefits developed under a Federal-State partnership. The key to its success is the use of existing commercial systems of automated teller machines and point-of-sale networks to deliver benefits.

The Benefit Security Card pilot with the Southern Alliance of States (SAS) reinvents the expensive paper-check and food-coupon delivery of benefits to recipients. The SAS project is the first combined Federal-State project providing single-card benefit access for clients. Previous system implementation in States as well as the Federal pilots proved the viability of system functionality and the social benefits of electronic payments to clients. The SAS project provides access to multiple benefits (State administered or direct Federal) on a single card regardless of the source (State or Federal).

The SAS pilot converts the paper-intensive process to an all-electronic debit-card access program. In partnership with eight states, the SAS pilot was jointly initiated by the Federal government to provide better service for benefit recipients and less cost to taxpayers. The SAS States include Alabama, Arkansas, Florida, Georgia, Kentucky, Missouri, North Carolina, and Tennessee. Federal agency participation includes the Department of Agriculture, Department of Health and Human Services, Social Security Administration, and Treasury's Financial Management Service (FMS).

Treasury's FMS staff was charged with the implementation of the Benefit Security Card Program for the SAS. For the first time, the Federal government in partnership with the State governments of the SAS accomplished a joint Federal-State acquisition, consolidating the requirements of individual procurements and eliminating duplication for each of the SAS States.

As the initial phase in the Administration's strategic plan for the implementation of the one-card concept, the pilot involved:

- Continual political and policy management,
- Complicated confidential processes to select a financial agent to ensure the integrity of taxpayer funds, and
- Innovative approaches to integrate the regulatory, financial, programmatic, procurement, and policy requirements of five Federal agencies and eight States.

The smooth consolidation of these processes required FMS leadership to coordinate diverse entities into a cohesive team to ensure the successful cultivation, development, and maintenance of effective working relationships through critical phases of development and implementation. The spirit of the NPR's vision was the driving force to creatively address and resolve multi-tiered stakeholder interests.

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Management Tips

- Partners need to meet early and often.
- Partners need to listen to and respect each other. There is no "big and little." Each level of government has different role, responsibilities, and authorities.
- Keep everyone informed.

5 National Standards Are a Key Factor in Program Success

THE FEDERAL BUREAU OF INVESTIGATION (FBI) is developing the Integrated Automated Fingerprint Identification System (IAFIS) to serve the Federal, State, and local government law enforcement communities. This system will provide positive identification within two hours of electronically transmitted fingerprints of criminal suspects. IAFIS will replace the current manual system that requires approximately 20 days or more to respond to fingerprint cards received by mail. This movement to a paperless environment with drastic reduction in response time will help law enforcement agencies throughout the country. Searches will be conducted against a fingerprint database of up to 40 million known criminal subjects.

In developing IAFIS, the FBI adopted three major management techniques that have broad intergovernmental application. These are:

- An advisory policy board of Federal, State and local users,
- A Red Team/Remedy Team closed-loop management process, and
- Joint meetings with the senior management of all of the IAFIS contractors.

Each of these techniques will be discussed in sufficient detail to provide an understanding of their value to the program. The combination of these three techniques has led to an unprecedented level of openness and teamwork between system users, system developers, system operators, and contractors. The key is the commitment by program management to involve users, developers, operators, and department management in a real partnership to achieve common goals.

The Advisory Policy Board (APB) is an official government advisory board sponsored by the FBI Director. The Board has representatives from local police departments, State law enforcement agencies, a number of Federal agencies, and even the Federal judiciary. The Board helped define the system requirements for IAFIS and is involved in continuously monitoring the FBI's progress in developing the system. The Board is also the FBI's primary liaison to State and local users to help them prepare for the electronic transmission of fingerprint images.

The use of a Red Team/Remedy Team as an integral part of the management process was a successful technique because of the innovative manner in composing and using the team. The IAFIS Program Manager appoints the Red Team of approximately eight very senior level technical and management experts from industry and the government, with extensive experience in the development, transition, and operations of large information technology systems. A member of the APB executive committee also participates on the Red Team, representing the user community. A representative from the Department of Justice (DOJ) Chief Information Officer's staff is also a member. Additional members have come from the system operations organization and even from an FBI field office. The key factor is the team is composed of "outsiders" that are not involved in the day-to-day development of the IAFIS system.

Although the terms of reference for each Red Team are negotiated with the IAFIS Program Manager, the team has the freedom to examine any portion of the program it deems necessary and to interview whomever they choose within the FBI, DOJ, user community or the system contractors to obtain the desired data. All interviews are on a "nondisclosure" basis to ensure a free flow of information.

The Red Team out-briefing is given to IAFIS program management, FBI executive management, DOJ management, and APB representatives, with contractor management attendance. The key is openness, with no "punches pulled." The Red Team

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Management Tips

- Develop the system incrementally. Functions can be demonstrated earlier than previously planned, increasing confidence that the system can be integrated and operational on time.
- Keep potential users fully informed throughout development.

defines the problems it sees and what must be done to correct them.

The Remedy Team is then charged with defining how to implement the Red Team's recommendations. The Remedy Team is appointed by the IAFIS Program Manager and composed of "insiders." The Remedy Team assigns the action items and defines the schedule for implementation. One or two Red Team members periodically audit the organization's performance to ensure that the Red Team recommendations have really been understood and are actually being implemented.

The key to the success of this approach is that the Red Team recommendations do not become "shelfware" but are really implemented. This closed-loop management process has become institutionalized, has been followed annually for the past four years, and has materially contributed to the success of the IAFIS program.

The other major management technique is the semi-annual meeting of senior IAFIS contractors with FBI managers. These meetings have enabled the contractors' chief operating officers to fully understand the FBI's goals on IAFIS and helped develop team spirit in an open working relationship.

All three techniques converged this past year with a joint meeting of the IAFIS management, contractor management, and the Red Team and APB executives. An executive roundtable provided the forum for the contractor senior operating officers to present the lessons learned by their companies in building and transitioning information technology systems.

Funding was first established for IAFIS for Fiscal Year 1992 through the Federal budget process. To date, $545.4 million has been appropriated by Congress for IAFIS, and an additional $39 million in user fees from the current system have been applied to the IAFIS budget. With the expected FY 1999 appropriation and additional user fees, the total IAFIS funding will be $640 million. IAFIS is scheduled for operation in 1999.

In the process of developing IAFIS, the FBI sought ways not only to deliver the service, but also to make available cost-effective hardware and software to IAFIS users. Several proof-of-concept equipment suites have been installed to allow States and cities to transmit fingerprint data electronically. Additionally, the IAFIS program delivered a stand-alone Image Storage and Retrieval (ISR) system to its Clarksburg, West Virginia, facility approximately two years earlier than it was originally scheduled.

The ISR will eventually be fully integrated into IAFIS, but its early delivery allowed extensive training and use by the FBI service providers who will eventually work with IAFIS. The ISR has played a significant role in reducing the backlog of fingerprint search requests from nearly 3 million to fewer than 500,000 in the past 18 months.

A key factor in the success of IAFIS is the establishment of national standards for the electronic capture and transmission of fingerprint data. Before the IAFIS Program began, many States had their own automated fingerprint identification systems (AFIS). However, the systems were developed by different vendors and were not compatible with or capable of being interconnected with each other. In trying to determine if a person had a criminal record, a State could rely only on its own system, not query other States' systems.

With criminals so mobile, it is not unusual for a person wanted in one State to be apprehended in another, only to be released before he could be linked to his criminal past. Early in the IAFIS Program, the FBI worked with the American National Standards Institute (ANSI) and the National Institute of Standards and Technology (NIST) and, with cooperation from State AFIS, developed national standards for capturing and transmitting electronic fingerprint data. Now, if States buy new or updated systems, they are compatible with each other and IAFIS. Canada, the United Kingdom, and the international police organization INTERPOL have also adopted the ANSI/NIST standard.

The IAFIS Program also developed a cost-effective system for States and local police departments to scan inked fingerprint cards, store the images, and transmit and receive data to and from the FBI. This system allows law enforcement organizations to connect to IAFIS and receive quick responses to fingerprint search requests.

When initially conceptualized, the IAFIS development plan was in three segments, with each segment delivering its final, complete product as a single deliverable. The FBI had not determined how the segments would be integrated into a single system. In 1996, the FBI negotiated with the development contractors to establish an incremental delivery schedule, effectively breaking the segments into six smaller and more

manageable pieces. At that time, the FBI also contracted with Lockheed Martin Corporation to perform system integration. Since these actions represented a change in the basic acquisition strategy, they involved major changes to the development contracts. Substantial effort went into making the changes, and some delay in development resulted. However, the payoffs have been significant, especially from the standpoint of diminished system risk.

By developing IAFIS in incremental pieces, considerable functions have been demonstrated earlier than previously planned. This has increased confidence that the system can be integrated and operational on time. Under the old system, integration efforts would not have begun until all segments were delivered, and the number of problems uncovered at that time would have had to be addressed at once. Under the incremental development strategy, integration has been spread over a three-year period.

The FBI has informed future IAFIS users of capabilities and status throughout the development. Law enforcement agencies across the country are anxiously awaiting this exciting new technology. Through regular meetings with the APB, State officials, and professional law enforcement and identification services associations, the IAFIS Program Office has set and managed expectations across government boundaries. Working together, the IAFIS partners have developed teamwork that is sure to result in program success.

6 Interagency Approach Credited for Project Success

THE GREAT LAKES ECOLOGICAL ASSESSMENT (GLA) is an interagency effort to consolidate, analyze, and distribute environmental, biological, and socioeconomic information in the Northern Lake States. The GLA began in earnest in June 1996 following an award from the Interagency Management Council of the National Partnership for Reinventing Government (NPR).

The GLA encompasses approximately 98,000 square miles in northern Michigan, Wisconsin, and Minnesota. This area is one of the most densely forested regions of the country, with 50.5 million acres in forested lands. Over $24 billion dollars is generated annually from forest products, and expectations for continued development are high. With this vast forested acreage, plus Lakes Superior, Michigan, and Huron, tens of thousands of inland lakes, and extensive networks of rivers and streams, the region provides recreational opportunities for approximately 50 million Americans living within a day's drive, resulting in nearly $30 billion dollar per year in tourist revenues.

Demographically, the region is a confluence of rural and urban Americans who oftentimes have different perceptions of natural resource values. Local and regional economic dependencies on both recreational and commodity-based production lead to competing and frequently conflicting land-use emphases. Land-use policy and practices can have far reaching economic and ecological implications, and information availability is key to objective and publicly acceptable decision making.

The overall goals of the GLA are to cost-effectively develop a comprehensive knowledge base for integrated resource planning and management and to provide a scientific basis for inventory, planning, management, and monitoring activities. The impetus for the GLA was the need by Federal, State, and private land managers for various types of information. Although considerable information was either available or was being collected, this information often resided at different institutions, was archived at different scales and in different formats, and was typically inaccessible to government agencies or the public except on a case-by-case basis.

The GLA is not a decision-making process under the National Environmental Policy Act (NEPA), but rather organizes existing information and provides new information to be considered as part of the NEPA process. Additional information on status and availability of data can be viewed on the project Web page at: http://www.ncfes.umn.edu/gla/index.html.

Accountability was determined through monthly reviews of progress, unanticipated problems, and compensating actions. Performance was measured in several ways. Semi-annual reports were submitted to the Interagency Management Council of the NPR noting accomplishments and expenditures. Informal interagency meetings were held and reports were submitted to appraise senior managers of project status and direction.

Although the project has a manager, the virtual network of universities and government agencies was not structured in a traditional supervisor and subordinate relationship. Employees working on this project reported to their respective supervisors within their own agencies. A great deal of good will and honor was required in accomplishing project objectives.

This effort is supported by many partners who have a collective interest in its outcome. The Interagency Management Council of the NPR has pooled funding for the project entitled "Coordinated Management and Utilization of Natural Resource Information for Forest Lands in the Great Lakes Region." Partners

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Management Tips

- Make sure that the partnership arrangements cover staffing, funding, and management structure. The absence of cross-agency supervisory structure makes it difficult to solve staffing problems.
- Determine which rules govern the acquisition of computers and associated equipment.
- Keep partners and stakeholders informed about funding arrangements. In some instances tasks weren't funded while others were double funded.

include the General Services Administration, USDA Forest Service, Washington, D.C., the Eastern Regional Office, and the North Central Research Station. The six Lake States National Forests have provided support and funding. Many individuals from a wide variety of natural resource and academic organizations have also contributed technical information and staff time. Organizations include: the USDA Forest Service; USDI Geological Survey, Biological Research Division; Land Information and Computer Graphics Facility, University of Wisconsin at Madison; Michigan State University; the Natural Resources Research Institute, University of Minnesota, Duluth; USDA Natural Resources Conservation Service; USDI Fish and Wildlife Service; and the Departments of Natural Resources in Minnesota, Wisconsin, and Michigan. Delivery of the information over the Internet would not be possible without assistance from the USDI Geological Survey, Biological Research Division in Onalaska, WI and the Northeastern Area, State and Private Forestry Branch of the USDA Forest Service in St. Paul, MN.

Partnering arrangements were made through informal discussions building upon existing written agreements and memoranda of understanding for data and information sharing. In the case of government-university arrangements, cooperative agreements were signed stipulating annual work items and related budgets. Buy-in incentives were for the most part the recognition of mutual benefits among involved agencies and terms of cooperative agreements where universities were funded for specific work items.

Funding was received from two primary sources: the Interagency Management Council of the NPR and the National Forest System of the USDA Forest Service. Several issues developed with the USDA funding due to constraints on expenditures and annual budgeting in a multi-year project. Specifically, the National Forest System is prohibited from entering into cooperative agreements with universities, whereas the Research Branch of the Forest Service routinely uses cooperative agreements to fund research at universities. The funds received from the NPR were administered by the Forest Service Research Branch, allowing the project access to the expertise, data, facilities, and equipment of the three involved universities. The USDA National Forest System funding could be spent only on Forest Service employees. This required careful planning and tracking of needed expertise, equipment, and facilities while meeting project goals.

Numerous intergovernmental benefits were achieved. In particular, diverse technical skills of various employees stationed with different institutions, increased capabilities of pooled equipment and facilities, and access to data were facilitated through an intergovernmental approach. Numerous intergovernmental issues also were encountered. These included divergent agency missions and priorities, competition among agencies and individuals in agencies that have traditionally worked independently, and questions regarding both data ownership and intellectual property.

While the benefits to an interagency approach far outweighed the drawbacks, one lesson learned in the GLA is the need for senior agency officials' concurrence and written commitment, particularly regarding terms of programs of work for competitive awards. A problem of continued agency commitment developed, where, for example, Forest Service employees assigned to work part time for the duration of the project were reassigned without considering effects on project commitments. An additional problem resulting from the absence of clear commitments from senior agency officials was the failure of certain agencies to devote the staff time originally promised for meeting project goals. The lack of a formal cross-agency supervisory structure prevented rectifying these problems.

Because Federal funds had supported university and State-agency data and model development efforts, GLA was able to access these products. Individuals within organizations, however, occasionally felt that their products, regardless of funding source, were exclusively theirs. Considerable time was spent convincing them that they worked in public service institutions and that their work was not proprietary.

Although interagency problems emerged, this project would never have been attempted nor its goals achieved without an interagency approach. At the onset, no one agency or university had the authority or resources needed to amass, analyze, and distribute information across a three-State area that included Federal, State, industrial, tribal, and private land holdings. Collectively, however, we had the authority and responsibility to conduct the GLA. The success of the projected hinged on agencies following through on planned commitments and resources.

Steering Committee Key to Program Success

THE NATIONAL CRIME INFORMATION CENTER (NCIC) 2000 is a major system development effort to replace the Federal Bureau of Investigation's (FBI) legacy NCIC system. NCIC has been in operation for over 30 years. It is a nationwide computer system that provides information on wanted persons, stolen vehicles, and other stolen property to authorized law enforcement users at the Federal, State, and local levels.

Over 79,000 law enforcement organizations use NCIC. The system processes over two million transactions each day. NCIC 2000 will provide all the services that NCIC currently provides, as well as such enhancements as limited fingerprint matching capabilities (right index finger only) and image processing capabilities for mugshots and pictures of stolen property. New capabilities include enhanced name search, automatic data quality checks, and access to external databases such as the Bureau of Prisons SENTRY file.

NCIC 2000's success is due to the coordination and partnership among Federal, State, and local law enforcement that has been a hallmark of the NCIC system. NCIC uses, and NCIC 2000 will continue to use, a shared management concept. Under this concept, system users provide the data and verify that their records are complete, accurate, and up-to-date. The FBI provides the hardware and software applications that allow users to store, access, and retrieve this information. Because users provide the information, the FBI does not charge a fee to use the system. This concept allows all levels of law enforcement to work together to enhance public and police officer safety.

NCIC policy is made by the Criminal Justice Information Services (CJIS) Advisory Policy Board (APB). The APB, in place since NCIC first began operations in 1967, has 30 members representing Federal, State, and local law enforcement organizations. This Board makes all policy decisions affecting the NCIC system, subject to the approval of the FBI Director and the Attorney General. This approach ensures an effective intergovernmental partnership that gives each level a voice in the system's management and use.

While the CJIS APB serves as the guiding hand for NCIC 2000 development, the FBI took additional steps to ensure an intergovernmental partnership at the technical and end user levels, as well as at the policy level. The FBI had four technical staff from the Illinois State Police (ISP) work on the program at FBI Headquarters in Washington, DC, and the development contractor's site in Melbourne, FL, from 1995 to 1997. They played key roles in reviewing specifications and analyzing development work on the core part of the NCIC 2000 system known as the Central Segment.

ISP staff also analyzed telecommunications specifications, application software, and the contractor's design for computer based training for end users. The State and end-user level perspectives the ISP staff provided were invaluable in ensuring that the system development effort considered and complemented their needs and concerns. ISP staff also started an NCIC 2000 newsletter, available on the FBI's World Wide Web homepage, to keep end users informed of NCIC 2000's progress and its impact on local law enforcement. FBI staff has continued to publish this newsletter on a bimonthly basis.

The FBI has continued its relationship with the ISP, having them review the contractor's software designed to run on workstations at the end-user level. Staff from the New Jersey State Police are also reviewing this software. Their evaluations have provided excellent insights into the strengths and weaknesses of this software. This early evaluation gives the FBI the opportunity to correct problems found before NCIC 2000 begins operations in 1999.

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Management Tips

- Establish a board, with representation from each level of government involved, to act as a steering committee and policy making body.
- Formalize the roles and responsibilities for analyzing software developed for the end user.
- Begin publication of a newsletter early on.

Other contact with State and local law enforcement included a National NCIC 2000 Technical Conference held in September 1997 in Tulsa, OK, and a program, in cooperation with the Public Safety Wireless Information Network (PSWIN) to test NCIC 2000 software in a variety of users' wireless communications environments. The FBI's CJIS Division frequently surveys State level users on issues affecting NCIC 2000, such as communications protocols supported and Year 2000 readiness.

The FBI funded ISP participation in a way that was consistent with the mutual benefits the arrangement provided. The ISP paid the lodging and per diem costs of their employees, while the FBI paid for travel. For the wireless testing program, the FBI received funding from PSWIN to set up testbeds. This allowed States to minimize the costs of participating in the program. The FBI has adopted a similar approach for other NCIC 2000 system testing with users, providing all necessary communications devices and test scripts.

The factors that worked best in this approach are:

1) The APB structure and process that ensures an equal voice for each member in the intergovernmental partnership,

2) The technical expertise and input that State-level staff provided to support and enhance the system development effort,

3) The communication with the grass roots level of law enforcement through the NCIC 2000 newsletter and frequent user surveys, and

4) Consistent high-level management support.

NIH Program Streamlines Acquisition of IT Products and Services

8

THE NATIONAL INSTITUTES OF HEALTH Information Technology Acquisition and Assessment Center (NITAAC) program was established in September 1995. This program has become the Government's most innovative Multiple Award Contract (MAC) provider of quality Information Technology (IT) products and services.

There are three acquisition contract vehicles under the NITAAC program, the Electronic Computer Store (ECS), the Chief Information Officer Solutions and Partners (CIO-SP) contract, and the Image World (IW) contract. These acquisition mechanisms have substantial visibility in the private sector and across all levels of the Federal Government. The indefinite-delivery indefinite-quantity (IDIQ) contracts provide for rapid order placement and significantly reduced task order turn-around time (less than 30 days). The contracts are inexpensive to apply and provide rapid response and innovative solutions.

NITAAC took advantage of opportunities to partner with industry during the development of all three contracts, sharing the identification of tasking areas and products to best meet the needs of governmentwide users. Innovative contract structures and payment strategies were tested with the cooperation of both industry and government partners, resulting in the streamlining of the procurement process. The multiple award IDIQ structure provides government buyers with a number of suppliers and products to choose from. Industry savings in bid and proposal costs permit closer attention to competitive offerings and better solutions.

Some of the advantages of the IT services provided under the NITAAC program include:

- A broad range of offerings (IT hardware, software and services; imaging technology; and total IT solutions)
- Ease of use
- Flexibility
- A broad range of contract types (time and material, cost plus fixed fee, cost plus award fee, firm fixed price).

Difficulties with the NITAAC program have centered largely on the recovery of fees from other government agencies. As an intergovernmental program, NITAAC has had to accommodate numerous agency financial accounting and payment systems. In order to deal with this, NIH instituted a vendor collection system that allows industry to collect the NITAAC servicing fee as a separate line item on the Federal agency funding document and remit the fee directly to NIH with a minimum of collection burden on NIH. This system reduces the burden on user agencies, as only one funding document needs to be prepared, saves time, and eliminates the arduous approval chain for an interagency agreement.

Agency compliance with ordering guidelines has been an area of concern. NITAAC has increased customer outreach and enhanced vendor training in proper procedures. This has led to more efficient processing of orders.

A last major difficulty has been the variable interpretations of the applicability of the Economy Act. NIH has in effect a more specific Statute that, according to the Federal Acquisition Regulations, supercedes the Economy Act. This has been difficult to communicate and has wrongly inhibited some agencies using the NITAAC contracts. Clarification would enhance user understanding and contribute to more intergovernmental collaboration.

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9 "One-Stop" Service for Customers Faces Many Challenges

THE FEDERAL GOVERNMENT FORMALLY INITIATED WORK on the Simplified Tax and Wage Reporting System (STAWRS) in 1990. Currently, STAWRS is a Reinventing Government Phase II project under the auspices of Vice President Gore's National Performance Review. The National Performance Review considers STAWRS an example of a reinvention project that pools resources with other departments to provide "one-stop" service for customers.

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Management Tips

- Focus on the highest intergovernmental level first.
- Next, involve one or maybe two players at the next lower level.
- Be realistic. Pick out a little piece of work and implement it, then move to the next piece.

The 1993 National Performance Review document stated:

The system will serve Federal, State, and local taxpayers. It will allow the electronic filing of tax returns by individuals and companies, the electronic reporting of wages and withholding information, and other data required by all levels of government. In addition, the interagency Wage Reporting Simplification Project will be in place quickly - allowing businesses to file information once to serve many purposes. The savings from fully implementing this program over the life of the system have been projected at $1.7 billion for government agencies and $13.5 billion for private employers.

Federal project participants are the Internal Revenue Service, the Social Security Administration, the Small Business Administration, and the Office of Management and Budget. State participants are from State agencies associated with income taxation, labor, and child support in almost all the States. Private organizations such as the Federation of Tax Administrators, the Interstate Conference of Employment Security Agencies, the Association of Payroll Administrators, Intuit (tax software), and ADP, Inc., (payroll processor) also participate.

Work continues on the STAWRS project, although the goal for "one-stop" service remains to be achieved and a date for its achievement has not been established. Also, no agency has yet been assigned the responsibility for developing the "one-stop" service concept. During the initial planning phase, many challenges were identified. These included several general, overriding challenges and four categories of other major issues.

General challenges:

- The need for cooperation and continuing involvement of all stakeholders.
- The need for focused management and operation of the project, especially with the original project stimulus external to the Government.
- The need to implement legal and regulatory change. Project participants recommended that this issue might be addressed in a manner similar to the Uniform Commercial Code, a set of laws which governs interstate commerce.

Categories of other issues that could delay, advance, or expand the scope of the project:

- Organizational and institutional issues that relate to the selection of an appropriate entity to develop and manage the new system. This includes legal issues associated with tax compliance regulations in the Federal and State governments. Researchers showed that complete implementation of STAWRS would likely affect more than 166 sections of the United States Code and involve many Federal departments. Researchers were unable to estimate State legal issues.
- User interface issues that relate to the way employers would send wage and tax payments to the new system. For example, because payments are to be sent electronically, an issue is how to authenticate the electronic document through some type of electronic signature process.

- Privacy, disclosure, and security policy issues that relate to the need for confidentiality of wage and tax information. The data must only be disclosed to authorized persons and must be protected from unauthorized access by sophisticated security systems.
- Wage-code harmonization issues that relate to the need to define standard data elements for wage and tax reporting and to coordinate filing periods and payment schedules.

These and many other technical, managerial, political, and economic factors have certainly affected STAWRS. STAWRS is an example of an exceedingly complex Federal-State intergovernmental information technology project involving many Federal and State agencies.

Successful achievement of the goal requires development and integration of an enormous information technology infrastructure. Significant changes will be needed in data processing software and hardware systems in the Federal Government and the States. Customers of the new system (e.g., corporations) will also need to modify software and hardware systems. Changes to tax regulations, processes, and procedures must be accomplished across multiple political jurisdictions. Financial planning must be synchronized across all participating budgetary organizations. Organizational and procedural changes must occur within each participating Federal and State agency that has responsibilities for any aspect of tax and wage reporting. A collaborative management structure must be put into place that all stakeholders agree to and are willing to commit to for an extended period of time, even though the political leaders will surely change. A carefully sequenced plan must be developed to determine how best to proceed to accomplish the thousands of tasks needed to accomplish the goal. Significant other policy issues will arise and will need to be resolved.

Given these complexities, it is likely that the NPR goal for STAWRS of "one-stop" service will remain illusory. But the STAWRS contribution to the study and advancement of intergovernmental information technology projects has been very beneficial. Some "best practices" for a complex project such as STAWRS would be:

1) ***Focus on the highest intergovernmental level first.*** In the case of the STAWRS project, this would be the Federal level. The Federal agencies should determine what they need to do to make that level work as they would like it to work. For example, IRS and SSA could agree on uniform electronic tax and wage reporting. They could build the infrastructure by first using prototyping and piloting techniques, and then expand it for full implementation. For STAWRS, it was difficult to make progress on the entire project because the Federal agencies were not aligned.
2) ***Next, involve one (or maybe two) players at the next lower level.*** This means that the Federal Government would get a State involved. With just one State working closely with the Federal Government, only one set of State issues would need to be considered at this stage. This would provide a good listing of State issues that need to be overcome and enable the development of methods (such as laws, regulations, incentives, grants, etc.) to address them. The State would then be able to share its benefits and experiences with other States. Trying to get all States to participate simultaneously is futile; the STAWRS results confirm this. The States are each at different levels of technological readiness, and some cannot envision the benefits they would get. Having a sister State show them real benefits would help.
3) ***Be realistic.*** Attempting to change a complex policy system that spans multiple political entities is probably more complicated than getting to the moon. Follow "Raines Rules." At each stage of the project, pick out a little piece of work and implement it, then move to the next piece. The really important thing is progress with every undertaking, eventually moving toward the goal. Trying to do a project all at once, sometimes referred to as the "grand design approach," is usually not successful. The project implementation plan must be in small pieces, consisting of a series of small steps that will eventually take you to the grand "vision."

10 Lofty Project Goal Encourages Participants to Work Together

THE TELEPHONE DIRECTORY is, in many cases, the first place an individual looks to find services or products, including those provided by Federal, State and local government agencies. Particularly in the case of government listings, what people were often confronted with was a morass of organizational gobbledy-gook that left them feeling frustrated. In October 1995, Vice President Gore asked the National Performance Review (NPR), now the National Partnership for Reinventing Government and the General Services Administration (GSA) to take the lead in an initiative that would affect all telephone directories in the United States. Thus was born the Blue Pages Project.

The goal of the project is to provide clearly written, easy to read, sensibly organized Blue Pages so that the public is not only enlightened about products and services provided by the Federal Government, but is readily able to find them. At the outset, the Project team was more than somewhat daunted by the challenge. Leadership was provided sporadically and varied from none at all to heavy-handed. As a result, accountability and performance measurements were difficult — if not impossible — to ascertain. However, performance is now measured by the number of directories completed, and leadership has become more thoughtful and even-handed.

The NPR set up initial team meetings. Team members included representatives from both the private and public sectors. Private sector representation included someone from the Yellow Pages Publishers Association and the government representatives from the Regional Bell Operating Companies (RBOC's). On the Government side, there were people from most Federal departments and large agencies. Many were their agencies' NPR liaisons. By the summer of 1996, each agency had identified a Blue Pages Coordinator — someone who would be the focal point for that agency's telephone directory listings. The coordinators attended — and still do attend — monthly meetings with the GSA Blue Pages Project Team. In cities where they exist, Federal Executive Boards (FEB's) and Federal Executive Agencies (FEA's), also began to be involved in the project.

As with any undertaking of this magnitude, levels of commitment vary widely. This is true with the agency coordinators, as well as with the FEB's, FEA's, and the phone companies. The Blue Pages Project Team is currently providing telephone directory publishers with Federal Government listings in hard copy and, in many cases, camera-ready copy. Some of the phone companies are publishing Federal Government listings in their directories at no cost to the government. At the other end of the spectrum, one phone company billed the government for a directory even though it had received camera-ready copy.

The varied levels of buy-in among the agency coordinators can be attributed to a couple of factors. One is the pervasive, "inside-the Beltway" view that, "If I can find a number I want in the Blue Pages, so can someone in Des Moines." Another has been the support — or lack thereof — the coordinators receive from their superiors. The lack of enthusiasm for this project in some quarters results not only from a resistance to the additional workload, but also to concerns about how to answer the increased number of calls agencies may receive as a result of being more readily accessible through the telephone directory.

The involvement of the FEB's and FEA's has been a mixed blessing. In the main, where the organization has been a strong and positive force in the local Federal community we have had successes. In a few instances, there have been issues of "ownership" between FEB/FEA's and agency

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Management Tips

- Plan on educating everyone involved in the project. Participants come from diverse backgrounds. They may not understand the problem or agree on a common goal.
- Include representation from every group that has a stake in the project.

coordinators when disagreements have arisen about what should be listed or how a listing should appear. These differences have usually been successfully mediated and resolved by the GSA Blue Pages Team.

Funding for the Blue Pages Project is currently provided by GSA's Federal Technology Service (FTS). Funding is recovered through the overhead rate charged to users of FTS's long-distance telephone service (FTS 2000). The current source of funding through the FTS overhead rate is inequitable in that reimbursement is based on long-distance use rather than an allocation of directory listings. Heavy users of FTS 2000 bear a disproportionate share of publishing costs as opposed to limited- or non-users. To resolve this issue, the Blue Pages Project Team is working with agency Chief Financial Officers to arrive at an equitable cost recovery system based on the actual number of listings an agency has in the enhanced Blue Pages listings.

Some issues were encountered that hindered the progress of the GSA Blue Pages Project Team. There was frustration over the dichotomy of being asked to deal with a project of this magnitude during a period of severe downsizing in the Federal Government. There was also some of the "if it ain't broke, don't fix it," sentiment. Many of the team members had lived in Washington forever and felt that the Blue Pages worked just fine — they already had some idea of where to find what we were looking for. Some of the people who attended the early meetings had NEVER even looked at the Blue Pages.

Another problem, which has somewhat abated, was that most of the coordinators had what could best be described as an ego issue about their agencies. For example, if someone is seeking information from the National Park Service, it really isn't necessary that he or she know that the Park Service is part of the Department of the Interior — except to the Department of Interior. It has taken considerable effort to wean people from wanting their listings to appear organizationally rather than functionally.

Although technical obstacles were considerable, great progress has been made in exchanging information electronically among Federal agencies and departments. Ultimately, the Federal Government would like to be able to provide input to the telephone companies electronically, but their in-house technological capabilities vary greatly. State and local government listings are just beginning to be integrated with Federal Government listings to provide the public with "one-stop shopping" to locate government services. Concurrently, Spanish language translations will be included in cities where there is a large Hispanic population.

Perhaps the single factor behind the ability of the participants to work together is the lofty goal of the project. Some of the coordinators have said that this is one of the few times in their government service that they have worked on something with real, tangible results — a project where you can turn to the government listings in a telephone directory and say, "I did this!" And it is truly a service to the public.

Next Steps

A MAJOR CHALLENGE FACING GOVERNMENT MANAGERS, for at least the next decade, is learning how to effectively manage intergovernmental programs. Intergovernmental management is more complex than managing a program that involves a single-level of government. Many more players tend to be involved, unique challenges concerning resource allocations are encountered, and legal issues arise about applicability of procurement and personnel regulations. The good news is that information about managing intergovernmental programs is beginning to accumulate and that information will benefit those who will undertake such projects in the future.

The Intergovernmental Advisory Board and GSA's Office of Intergovernmental Solutions have analyzed intergovernmental programs to learn about successful managerial, political, or technical solutions that may be useful to government managers. As a result, two reports have been written: the first is *The Challenging Road to the Government of the Future: Intergovernmental Management Issues and Directions* and the second is *Innovative Funding Approaches for Information Technology Initiatives*. This is the third report.

A sense of urgency arises when you realize that successful intergovernmental initiatives will revolutionize the way governments operate and provide services. Four steps can be taken to prepare intergovernmental managers. They are to:

- Expand the body of knowledge that exists about intergovernmental management and make that information readily available,
- Educate government managers on (1) the benefits of initiatives that cross governmental boundaries and (2) how to make them successful,
- Establish research priorities concerning intergovernmental issues, and
- Build a network of intergovernmental program managers.

Although information is accumulating about intergovernmental management, much needs to be done. Some method for governments to pool their resources must be found. Also, a way is needed to put managerial structures and long term programs into place that are not subject to changes in political leadership. Political leaders come and go while intergovernmental issues take some time to resolve. Solutions to these intergovernmental issues may require legal and regulatory changes to allow successful intergovernmental program management. Finally, we need to establish proponents that will promote intergovernmental program management and educate managers on how to effectively mange such programs.

Limited resources necessitate careful selection of intergovernmental issues that need further research. Once identified, priorities must be set. One question we were not able to satisfactorily answer was "What approaches are needed to establish collaborative partnerships early on and how do program managers gain the cooperation of the major agencies?" Clearly, other pressing issues exist that vie for attention

In our research, we found that it was difficult to identify and locate intergovernmental program managers. Furthermore, when we did locate them, it was difficult to gather similar or like information about managerial, technical, and political issues. A tool is needed that would elicit and quantify such information. Successful practices and case studies can then be collected, analyzed, and results made available through reports and white papers.

Intergovernmental program managers need to establish a support network of peers where they can share experiences and solutions. The network should be built on an interest in intergovernmental management as opposed to an interest in one particular functional area. Intergovernmental managerial issues transcend those issues associated with more narrow, stove-pipe perspective found in such arenas as welfare reform and environmental management. Information sharing and networking can be encouraged through annual conferences and forums. A directory of intergovernmental managers would be useful as well as a Web site devoted to intergovernmental activities, people, projects, and lessons learned.

The challenge over the next decade is to move from vertically integrated government programs and legacy systems to integrated enterprise systems for the citizens and partners of the 21st century. Information from these 18 case studies and progress in implementing the next step recommendations pave the way for governments to better serve their citizens.

Notes