

The goal of every CTG partnership project is to build knowledge that improves the way government works. Our projects have helped state, local, and federal agencies increase productivity and coordination, reduce costs, enhance quality, and deliver better services to citizens and businesses. The results generated from each project add to the growing knowledge base designed to support the work of both government professionals and academic researchers.

Since 1993, CTG has conducted 34 partnership projects and collaborated with nearly 100 government agencies, 42 private companies, and 14 academic institutions and research organizations. Our foundation is our work here at home with New York State government, and our projects with state and local agencies continue to provide rich partnerships and opportunities to augment our knowledge and research. However, we also have the privilege to expand our scope of work as we develop new international collaborations and gain recognition as a world leader in digital government research and practice.

### INTERNATIONAL

**Public ROI—Advancing Return on Investment Analysis for Government IT** Assessing public return on investment (ROI) is a core problem in government information technology (IT) planning and decision making, resulting from shortcomings in currently available assessment methods and models. In partnership with SAP, the purpose of this project was to develop new methods for defining, measuring, and communicating public returns from IT investments in the government sector and to offer government officials recommendations for using these methods in planning and decision making.

Five international case studies examined how a significant government IT investment was conceived and developed, with particular attention to the role of public value in the process. The five case studies were:

- Commonwealth of Pennsylvania's Integrated Enterprise System
- Government of Israel's Merkava Project
- Austrian Federal Budgeting and Bookkeeping System
- Province of New Brunswick, Canada's Service New Brunswick
- Washington State Digital Archives

Interviewees included senior government officials, IT and program managers, and system users in each of the case study sites. Based on both the case studies data and related research findings, a project white paper was produced, *Advancing Return on Investment Analysis for Government IT: A Public Value Framework*. The report provided a framework broad enough in scope so that it can be applied to virtually any government IT investment—from simple Web sites to governmentwide information systems and architectures.

"Government agencies exist to provide services to the public, whereas businesses exist to generate revenue for their owners. Service New Brunswick is somewhat unique in that it exists to deliver government services while being mandated to operate like a business. This [Public ROI] white paper furthers our understanding of public investments in improved government service and the value they generate. Without the concept of 'public value' as a return on investment, it would be very difficult to gauge how much benefit a decision to invest in an IT initiative can have." Darrell Fowler, Director, Project Delivery, Service New Brunswick

**Building a Sustainable International Digital Government Research Community** Most funded research around the world addresses digital government challenges within the context of a single country; only a few investigations have compared results across national boundaries or tackled problems that are transnational in scope. This National Science Foundation (NSF)-funded project comprises a framework of opportunities for scholars interested in particular domains of study to encounter the work of international colleagues and to engage in discussions that can lead to shared research agendas and joint projects. The ultimate goals are to encourage investigation of international problems and to support comparative studies that seek universal theories and transferable practices.

Three streams of work are in progress: 1) a reconnaissance study to identify and summarize the state of international DG research, 2) an annual residential Institute on International Digital Government Research for doctoral students, and 3) support for four international working groups that were selected by peer review in 2006. The four working groups will meet periodically through 2009 to develop research agendas and products related to urban simulation, online consultation, geoinformatics, and North American digital government collaboration.

**International Working Groups** The topics for the four international working groups will address transnational and comparative issues of governmental processes, organization, decision making, and citizen participation: An Open

Platform for Urban Simulation Co-chairs: Paul Waddell, Daniel J. Evans School of Public Affairs, University of Washington and Michel Bierlaire, Ecole Polytechnique Federale de Lausanne, Switzerland Countries represented: Canada, France, Germany, Netherlands, Switzerland, United States Digital Governance and Hotspot Geoinformatics for Monitoring, Etiology, Early Warning, and Management Chair: G.P. Patil, Department of Statistics, Penn State University Countries represented: China, Indonesia, Italy, Japan, United States Online Consultation and Public Policy Making Co-chairs: Peter Shane, Moritz College of Law, Ohio State University and Stephen Coleman, University of Leeds, United Kingdom Countries represented: Australia, England, France, Israel, Italy, Slovenia, United States A Comparative and Transnational Research Agenda in North America Co-chairs: Theresa Pardo, Center for Technology in Government, University at Albany and Luis F. Luna-Reyes, Universidad de las Americas, Mexico Countries represented: Canada, Germany, Mexico, United States

**eGovernment 2020 Roadmap** The goal of eGovRTD2020, a European Commission-sponsored international project, is to identify and characterize future strategic research fields and possible holistic and dynamic models for governments in the year 2020. Led by the University of Koblenz in Germany, the project involves nine international partners from European regions, the United States, and Australia.

As part of this global partnership, CTG researchers organized two workshops to develop future scenarios and consider the preliminary findings of key future research themes for e-government. These and other scenario-building and road mapping workshops held with digital government academicians and practitioners throughout the world generated 13 research themes for the future e-government research agenda.

The final product of this initiative will be a book detailing the scenarios, road maps, and research themes generated throughout this collaborative effort.

## NATIONAL

**Library of Congress Collaboration for Preservation of State Government Digital Information** The US Library of Congress is responsible for a national strategy to collect, archive, and preserve the growing amounts of digital content, especially materials that are created only in digital formats. As part of this effort, CTG partnered with the Library to develop strategies for preservation of significant state and local government information in digital form. Working with the leaders of federal agencies and professional organizations serving state librarians, archivists, and chief information officers (CIOs), we designed and launched the State Government Digital Information Preservation Survey in January 2006.

A mix of state libraries, archives, records management agencies, and CIOs from all 50 states and three territories responded to the survey. After analyzing the results, two resources were produced to support current and future state and national digital preservation efforts: *Preserving State Government Digital Information: A Baseline Report* and the *Web-based State Government Digital Preservation Profiles*.

This project helped raise awareness of digital preservation issues, created a new communication channel among states, and produced practical assessment tools to help states formulate successful digital management and preservation strategies.

**NATIONAL EXPOSURE** The April/May 2006 issue of Public CIO magazine featured an article by Theresa Pardo, deputy director, and Brian Burke, senior program associate, focusing on the critical role state chief information officers (CIOs) play in managing and preserving government digital information. Partnering for Preservation highlighted the consensus among state librarians, archivists, and CIO staff, as well as representatives from the Library of Congress and National Association of State CIOs, on the need to build collaboration between traditional information and records custodians and state government CIOs.

**Modeling Interorganizational Information Integration** Integrating and sharing information within and across governments involves complex social and technological interactions. These dynamic processes, and their implications for better government, are at the heart of CTG's overall research agenda. This particular NSF-funded project began with a study of information integration initiatives in the policy areas of criminal justice and public health. Based on these investigations, CTG researchers are developing a theoretical model of interorganizational information integration and testing it with a survey that reflects the main findings from two New York State case studies, projects in six other states, and previous modeling efforts. The framework addresses the relationships among key variables such as leadership, authority, past experiences, trust building, and clarity of roles and responsibilities and how they influence the outcomes of intergovernmental information sharing.

**Leveraging Investments in the Electronic Commons Project** The Electronic Commons is a collaborative program of the USDA Forest Service to identify and fund eight training, technical assistance, and natural resource-related community building projects using advanced communications technologies to share information

and solutions on topics of concern to national forests and nearby communities. Of particular interest were projects that linked geographically disparate national forest communities in the 32-state eastern hardwood region. USDA Forest Service asked CTG to assist the grantees as they developed and implemented their projects and to capture lessons learned.

We provided ongoing assistance to the grantees via teleconferences throughout the duration of their projects. In addition, CTG staff facilitated a post-project meeting attended by all the grantees to document the experiences of each project team, examine the factors critical to success, and share lessons learned. A Web-based report is being prepared for release in early 2007.

Project organizers hope that this project will create the foundation for ongoing collaboration among state and federal agencies, nongovernmental organizations, and others with an interest in improving the exchange of natural resource information and ideas.

"When organizers of Electronic Commons decided to include the post-project meeting, we had a sense it would be valuable to everyone, but we had no idea how right we were. Not only were lessons learned captured, but there was a huge amount of peer learning that went on during the meeting." Al Steele, Physical Scientist, Northeastern Area, USDA Forest Service

### NEW YORK STATE

**New York State IT Workforce Skills Assessment Project** Information technology (IT) workforce issues have been a concern in New York State since the 1980s and were designated high priority areas in the 2004 and 2005 New York State Enterprise Information Technology Strategic Plans. As a result, in early 2005, the NYS CIO Council's Human Resources Committee organized a partnership of state agencies and labor unions, with CTG responsible for project management, survey design and administration, and data analysis and reporting. The goal was to gather information to help the state better meet the training and development needs of its IT professionals, and to identify future needs for IT skills.

Two voluntary on-line surveys were designed, administered, and analyzed; the first was directed to IT employees in New York State and the second to chief information officers (CIOs) in state agencies. The resulting survey report was the first step in a longer term effort. Based on the findings, the Human Resources Committee prepared nine recommendations for next steps and action plans to enhance professional development and skill proficiency for the entire IT workforce.

**Statewide Survey Results** The data from the IT Workforce Survey revealed the following:

- New York State has well educated employees with long tenures in one or two agencies and strong proficiency ratings in fundamental IT topics.
- Retirement projections for nonmanagerial IT employees, managers, and CIOs are mixed. A modest number will retire in the near future, but the rate of planned retirements will increase after 2009 for all three groups.
- A gap analysis revealed the current skill proficiency profile of IT employees does not align closely with the three-year skill forecasts projected by CIOs in key strategic growth areas of Web computing, infrastructure and networking, and information management.
- A stakeholder analysis revealed strong agreement about 14 target areas for statewide training and agency-level leadership attention. These include risk assessment, identity management, wireless technologies, and content management.

**Web Site Management Using XML: A Testbed Project** As Web sites have grown in size, complexity, and prominence, Web site management, content management, cost, and accessibility have become growing concerns for government agencies. This project was designed to confront these issues and to assist government agencies in examining the benefits and challenges of adopting XML for Web site management. The Testbed engaged five New York State agencies to study best practices, work toward agency-defined practical goals, and build organizational capacity for using XML. Each participating agency developed an XML-based prototype and a business case for further implementation of this approach.

The results were analyzed and evaluated to produce a suite of resources for the benefit of other government agencies. These resources include a Web site, The XML Toolkit, devoted to tools, tips, and references for using XML for Web site management; a Getting Started Guide to assist organizations in the transition to XML; an Executive Briefing that highlights the critical business and organizational motives for adopting XML; and a Lessons Learned report that captures the key benefits and barriers to XML implementation as identified through the Testbed experience.

### **Assessing Mobile Technologies in Child Protective Services**

Meghan Cook, program manager, facilitating a session of participants in the New York State Office of Children and Family Services' mobile technology pilot program.

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In early 2006, the NYS Office of Children and Family Services (OCFS) initiated a pilot program to test how portable information technology could be used for child protective services casework. The aim of the project was to evaluate whether such devices facilitated increased efficiency and effectiveness in Child Protective Service (CPS) investigations. CTG collaborated with OCFS to assess the use of mobile technologies. The pilot program was conducted in two counties, Westchester and Monroe, as well as in New York City, each of which were responsible for designing how the technology was tested.

The assessment was based on surveys, interviews, workshops, and analysis of data from the case management central database. The results show a generally positive impact on performance, but the effectiveness of the mobile device depends on a combination of factors. These include worker preferences, work practice demands, the capabilities of the various devices and systems deployed, and organizational support. Based on these initial results, a second phase will concentrate on a larger scale deployment of wirelessly connected laptops to CPS workers in the New York City Administration for Children's Services.

**Business Analysis of an Electronic Health Record For the Corrections Community** Health care has become one of the largest costs for correctional programs nationwide. This increase in health care spending has prompted the correctional community to look for new models and strategies for managing the health care needs of the inmate population. The New York State Department of Correctional Services (NYS DOCS) partnered with CTG to conduct a business analysis for moving to an Electronic Health Record (EHR) environment. Health Information Technology (HIT), and more specifically an EHR, is seen by many as the ultimate tool for improving the quality of health care delivery, lowering health care costs, and providing better information for patients and physicians.

The study provided a comprehensive description of the current state of medical records in NYS DOCS and discussed the nature of the challenges the agency faces in a transition from a primarily paper-based medical record to a fully-integrated EHR.

### **Balancing Growth and Public Safety: A New Information Access and Use Model for the Town of Bethlehem**

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The Town of Bethlehem, with a population of over 31,000, is located approximately six miles from Albany, the capital of New York State. Bethlehem is a suburban community at an important crossroads in its development. It is experiencing unprecedented growth along with the accompanying demand for services. Town managers contacted CTG to work with their management team to develop a new management model that uses information about performance to inform all levels of decision making.

The project focused on the development of a performance measurement framework to support increased access to and use of information in public safety decision making and planning. Recommendations focused on expanding information access to support assessments about the extent to which town resources are used to "achieve optimum service performance at least cost."

For more information on current and past projects, [click here](#).