AIRNow-I Shanghai: Crossing Cultures, Sharing Knowledge
Aug 2011
AIRNow-International (AIRNow-I) is an initiative led by the US Environmental Protection Agency (EPA) to redesign the US air quality monitoring and public reporting system to be scalable, interoperable, portable, and affordable to any country. Its guiding vision is a readily usable worldwide platform for sharing air quality information to improve public health. This case study assesses the internationalization of AIRNow through the lens of a collaborative project between EPA and the Shanghai Environmental Monitoring Center (SEMC) in China. We trace the history of air quality policy and management in both countries and then explore the structure and dynamics of their joint effort to build AIRNow-I Shanghai. This report describes the influences of the separate Chinese and American contexts on the participants and their interactions, and identifies the ways in which they bridged many types of contextual distances to produce successful results.

Exploratory Social Media Project Phase I: Identifying benefits and concerns surrounding use of social media in government
Dec 2009
In response to growing interest in and concerns about social media in the public sector among government professionals, CTG launched a project aimed at exploring some of the issues and benefits connected with social media tools. This report summarizes results from two workshops held with government professionals from New York State (NYS) as part of this project. The workshops were designed to collect information on the value NYS agencies seek in their current or future use of social media, as well as their most pressing questions and concerns regarding that use. The report summarizes the results from workshops, with full results provided in three appendices, and concludes with a section outlining the next steps in the project.

Assessing Mobile Technologies in Child Protective Services (2008-2009): A Demonstration Project in 26 New York State Local Departments of Social Services
Dec 2009
The New York State (NYS) Mobile Technology Demonstration Project is a multi-year initiative to assess the use of mobile technologies in child protective services (CPS) work in New York State. Starting in 2006, this collaborative effort among the NYS Office of Children and Family Services (OCFS), county Departments of Social Services (DSS or local district), and the Center for Technology in Government (CTG) at the University at Albany has had four distinct evaluation studies. This assessment focuses on the most recent effort in 2008-2009. Starting in January 2009, twenty-six NYS local social service districts received mobile technologies for CPS. There were 505 mobile devices deployed CPS caseworkers and supervisors and managers. This assessment solely addresses measures of productivity and efficiency.

Mitigating Cross-Border Air Pollution: The Power of A Network
Oct 2009
This report describes how a diverse mix of individuals and organizations representing two countries, three states, multiple levels of government, private industry, academia, and the public were able to successfully organize and then respond to improve air quality along the U.S. and Mexican border. The focal point of this study is the Joint Advisory Committee for the Improvement of Air Quality in the Ciudad Juárez, Chihuahua/El Paso, Texas/Dóña Ana County, New Mexico Air Basin (the JAC). It was through the JAC that this diverse mix of key actors were able to navigate the complex web of political, cultural, legal, and economic factors that posed challenges to developing a unified response to this shared air quality problem. The JAC’s strategies and methods were powerfully shaped
by the characteristics of the physical setting and the organizational and political context. Many of these strategies
and methods have considerable promise for other air shed regions, but must be tailored to the unique physical
and social situations of each one.

IT Governance Capability: Laying the foundation for government interoperability
Oct 2009
Creating interoperability in the governmental context requires government leaders to take responsibility for
improving the capabilities of government agencies to effectively partner with other agencies and governments as
well as the private sector, non-profit groups, and research institutions. Governance is a foundational capability for
creating and improving government interoperability. Recent research conducted by the CTG draws on a
comparative case study of IT governance to illustrate that while effective governance structures include a
consistent set of elements or capabilities, there are also a wide range of context specific issues that must be
responded to in the governance design, development, and implementation processes.

Factors Influencing Government Cross-Boundary Information Sharing:
Preliminary Analysis of a National Survey
Sep 2009
This report summarizes the results of a national survey of cross-boundary information sharing in the public sector
conducted by the Center for Technology in Government (CTG). This national study, conducted by CTG and
supported by a grant from the National Science Foundation, was designed to understand how effective
information integration and sharing occurs within and across boundaries of organizations. The purpose of the
survey was to test the generalizability of a preliminary theoretical model of how policy, organizational, social, and
technical factors interact to create criminal justice and public health information sharing capabilities. CTG
developed this model based on the data collected and analyzed during earlier phases of the research project.

International Digital Government Research: A Reconnaissance Study (1994 -
2008) UPDATED
Aug 2009
Today, digital government (DG) research is being conducted all over the world. Most of this work is focused within
the geographic and political contexts of individual countries. However, given the growing influence of global
economic, social, technical, and political forces, the questions embedded in digital government research are now
expanding to international dimensions. A reconnaissance study such as this one focuses on the defining
characteristics of a topic rather an in-depth analysis. In this report, we describe the size, scope, variety, and
trajectory of the field illustrated with selected studies and organizational profiles. This study is part of a multi-year
effort funded by the United States (US) National Science Foundation (NSF) to create a framework for a
sustainable global community of digital government researchers and research sponsors.

Creating Enhanced Enterprise Information Technology Governance for New York
State: A Set of Recommendations for Value-Generating Change
Aug 2009
New levels of capability for coordinated action across organizational boundaries are required in order for
government to realize the transformative potential of technology and cope with new economic imperatives. This
report outlines five recommendations for change developed through a collaborative, consensus-driven process
conducted by CTG on behalf of the New York State CIO community. These recommendations are targeted at
building new capability for enterprise information technology investment decision making for New York State. The
recommendations extend existing enterprise IT governance capability by introducing a new level of transparency
in decision making, increasing the opportunity for alignment of IT investments with New York State’s strategic
priorities, and fostering the development of policies and standards to guide those investments.

Enterprise IT Governance in State Government: State Profiles
Aug 2009
Over the last fifteen years, the role of IT in state government has grown in prominence, which has drawn attention to how IT is governed at the state level. This report reviews enterprise IT governance arrangements in thirteen states (California, Florida, Georgia, Kansas, Kentucky, Maine, Michigan, Minnesota, New York, North Carolina, Pennsylvania, Texas, and Virginia). These states were selected to create a diverse set of examples and to gain a broad picture of state enterprise IT governance efforts in the United States. There are a total of five data summaries included within the report. First is a high-level comparison of state enterprise IT governance elements. This comparison is followed by a more detailed overview of three enterprise IT governance components: state CIO Councils, state executive IT boards, and budgetary authority for IT decisions. Finally, the report concludes with in-depth profiles and models of state enterprise IT governance arrangements in each of the thirteen states. Together, these resources provide one of the most comprehensive reviews of public sector IT governance currently available.

Journal Articles and Conference Papers (4)

Issues and Strategies for Conducting Cross-National E-Government Comparative Research
3rd International Conference on Theory and Practice of Electronic Governance (ICEGOV2009), Bogotá, Colombia, Nov 10 2009

This paper addresses and discusses the central issues that researchers have to deal with when conducting cross-national comparative research within the area of e-government. The issues are classified into two main categories. The first category represents the issues and challenges that may affect the reliability and the quality of data being collected for comparative studies. The second category represents the remaining issues related to the research objective, the selection process of countries and the analytical strategy. The paper discusses the major alternatives of these issues and provides a rationale for the selection process among them. The paper concludes by discussing the interrelations between the identified issues and clarifying the main decisions that researchers have to take when conducting cross-national comparative research.

Clarity of Roles and Responsibilities in Government Cross-Boundary Information Sharing Initiatives: Identifying the Determinants

Research has shown that clarity of roles and responsibilities (CRR) influences the effectiveness and performance of individual organizations as well as cross-boundary or interorganizational group efforts. Role clarity increases job satisfaction, commitment, and involvement and reduces tension and anxiety among organizational members, which results in lower staff turnover rates in organizations. In addition, CRR has been found to enable other important determinants of success in cross-boundary information sharing (CBI), such as building trust among members of CBI initiatives. However, few studies attempt to understand the determinants of CRR in a CBI initiative. Using data from semi-structured interviews from eight U.S. state and local government public health and criminal justice information sharing cases, this paper seeks to fill this gap by examining these determinants.

From “Need to Know” to “Need to Share”: Tangled Problems, Information Boundaries, and the Building of Public Sector Knowledge Networks
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Public managers confront tangled problems every day across all policy domains and levels of government, and they need to be ready to deal with them through networked forms of engagement and action. Knowledge networking—the ability to create public sector knowledge networks (PSKNs) suitable for addressing these problems—requires a certain set of skills and attitudes, as well as interpersonal and other kinds of trust. Network development processes that emphasize early, open dialogue and examination of assumptions and expectations do better than those that rush forward with a fixed IT solution in mind. Those that adapt and learn from experience are more likely to succeed in achieving their substantive project and networking goals. Finally, to be sustainable as organizational forms, knowledge networks need some legal foundation, access to resources, supportive policies, and innovative forms of leadership.
Information Sharing at National Borders: Extending the Utility of Border Theory

Research has identified the potential and challenges of information sharing in government settings mostly within the context of a single country. The challenges facing inter-governmental information exchanges that take place across national border governments, however, are thought to be different. To date, research has failed to provide theoretical guidance in understanding the complexities that the cross border environment brings to information sharing initiatives. This paper brings together Brunet-Jailly’s theory of borders [10] and definitions of crossboundary information sharing from Gil-Garcia et al. [39] to develop a framework that incorporates the information sharing and technology dimension with the economic, political and cultural contextual factors impacting border regions. This study is an initial step toward understanding the challenges that the border environment brings to information sharing initiatives. Future research is necessary to empirically test the utility of the proposed theory as a tool for understanding this new area of both practical and theoretical importance.

Book Chapters (1)

Information Sharing and Public Health: A Case-based Look at the ICT Expectations-Reality Gap

Sharing information across organizational boundaries is central to efforts to improve government operations and services. However, creating the capability necessary to enable information sharing across the boundaries of organizations is among the most difficult types of information technology projects. New knowledge about information sharing is required; in particular, new understanding about how government, non-governmental and private sector organizations come together to share information is necessary. This chapter draws on the experiences of key actors in three states in the United States as they organized to create new capability to share information as part of their responses to the West Nile virus outbreaks. The cases highlight the gap between expectations and reality, providing opportunity to more fully understand the gaps between expectations (the hype) about ICTs and the reality facing government practitioners who seek to use ICTs to share information. Examining the cases in terms of four contexts of information integration and sharing provides a more specific understanding about the gaps between these expectations and the reality (after the hype). The lessons learned in the context of public health include the central role of information sharing and the implications of resource constraints on data capture and use capability in the context of an outbreak management and surveillance effort. Insight into the interdependence of system design and process support and improvement in the context of public health surveillance was also found to be critical to future planning of public health surveillance systems. This chapter serves to reemphasize to both researchers and practitioners the need to close the gap between expectations and reality; the point is made again through the cases that closing the gap depends on strategies that draw on technology, process, interorganizational, and political perspectives and resources.

Issue Briefs (3)

Governance: The Value of a Custom Fit
Wed, 26 Aug 2009

Reduce costs, increase transparency and improve service quality: these goals are on the minds of chief information officers (CIOs) everywhere. Consolidation, centralization, and integration are recognized as strategies for achieving these goals, but these strategies require new information technology (IT) governance capability for making state-wide coordinated information technology decisions.

No Loss in Translation: Using XML Databases to Simplify and Streamline Processes
Mon, 03 Aug 2009
For over a decade, the simplicity, portability, and flexibility of XML have made it the accepted standard for formatting and sharing data via web services and service-oriented architecture (SOA). However, XML data that is easily transferred across machines and applications is not as easily stored and processed within those same machines and applications. As a result, the XML data is typically transformed into non-XML formats better suited for use within databases and applications. This transformation step adds a layer of complexity to the process.

Opening Government with Information
Mon, 01 Jun 2009

Open government is grounded in the belief that access to government information is essential to the functioning of democracy. In the United States, information-based strategies to promote open government began with the Constitutional rights to free speech and a free press, and later extended to public meetings laws that require government to conduct its business in open venues. In the 1960s, information-based strategies such as freedom of information laws further established the public’s right to know and set the rules for gaining access to most government records. Efforts to broadly open government information began in the 1990s with the introduction of electronic government initiatives that turned the focus toward creating electronic access programs, electronic records programs, and thousands of government Web sites.