

2012 Publications (20)

Guides (1)

Opening Gateways: A Practical Guide for Designing Information Access Programs

Apr 2012

This Guide was originally published under the title of *Opening Gateways: A Practical Guide for Designing Electronic Records Access Programs* in 2000 and revised in 2002. Since it was issued, technological advances have given us a much broader array of tools and approaches to providing access to information. These advances have created a broader and in some ways more sophisticated community of potential users and stakeholders whose expectations of ease of access and immediacy of information have grown exponentially. These changes, combined with a social and political environment that demands public sector entities be more open and transparent in their operations, have put increased pressures on government to provide access to more and better information through readily accessible means such as the Internet. This guide is designed to help government agencies develop affordable, manageable, and effective information access programs. Given the changing technological and social environment, the type of planning processes facilitated by this Guide are more relevant than ever. The revisions have focused on updating many of the examples provided and language used as well as including an expanded discussion of program models available due to technological advances.

Reports (5)

The Dynamics of Opening Government Data

Nov 2012

The information polity perspective described in this paper provides government a way to identify the various stakeholders and their patterns of interaction that influence or control the generation, flows, and uses of enhanced information resources in open data initiatives. The dynamic modeling techniques used highlight the ways different constraints can impact the system as a whole and affect value creation. These tools support planners' ability to generate informed hypotheses about changing patterns of interaction among existing and potential new stakeholders. In this way, governments can better evaluate the costs, risks, and benefits of a wide variety of open data initiatives.

Building On-ramps to International Research Collaboration: Replicable strategies for entry, productivity and sustainability

Oct 2012

Globalization presents important opportunities and difficult challenges that demand internationally-trained, culturally-aware researchers to collaborate on topics that cross borders, political systems, and cultures. International research collaborations on topics such as livability of cities, political participation, or the health of civil society offer potentially great benefit, but such work tends to be sporadic and informal because traditional research training and funding structures make it logistically and financially impractical. In response to this problem, from 2007 through 2010, we experimented with two low-cost innovative approaches or "on-ramps" to international collaboration in digital government research: a set of three international working groups composed of scholars from a variety of countries and disciplines and an annual residential research institute for PhD students to develop an early appreciation for the global impact ICTs on the public sector. This evaluation report shows that both approaches are low cost, high impact strategies to forge lasting networks of relationships as well as long-term career benefits.

Modeling the Informational Relationships between Government and Society: A

Pre-Workshop White Paper

Jul 2012

This white paper is part of a year long CTG thought leadership project with SAP focused on developing new research and practical tools for helping government produce public value from their open government initiatives. In June of 2012, the paper was shared with an international group of open government experts from government, academia, and the private sector; 25 of which convened at CTG in Albany, NY at the end of June. Workshop participants provided feedback on the conceptual model presented in the paper and crowdsourced ideas for improvement. CTG is using the results from the workshop to develop a final version of the paper and identify opportunities with the workshop participants for testing and implementing the approach with governments pursuing open government initiatives.

Developing Public Value Metrics for Returns to Government ICT Investments

Jun 2012

This report presents a new approach to assessing public value returns as part of an overall return on investment analysis for government information and communication technologies (ICT). The approach addresses one basic question about public value assessment: What constitutes good evidence of public value impacts? The answers provided here are intended to augment the return on investment analysis methods found in the *E-Gov Economics Model: Real Impact for Better Government*, developed by Microsoft. However, the approach here has potential uses beyond connection with that Model, and can be more generally useful in the assessment of public value returns to government programs and investments. The approach consists of a way to identify, collect, and interpret a variety of evidence, both quantitative and qualitative, that can be used to assess public value impacts. The approach is designed for use by government practitioners and analysts in connection with return on investment (ROI) analyses. It is particularly aimed at use in connection with the *E-Gov Economics Model* to examine ICT investments by national and sub-national governments. The report includes recommended methods to collect and analyze these forms of evidence. The approach is based on prior work of the Center for Technology in Government and a thorough review of available research and professional writing on the subject of measuring public value. That review includes research in the related scientific literature and a survey of best practices reported in literature about government IT value assessment in the US and other countries. A draft version of this report was shared with a sample of knowledgeable government officials and analysts for review and comments.

Opening Government's Official Legal Materials: Authenticity and Integrity in the Digital World

Feb 2012

Increasingly, state governments are moving toward making primary legal materials available online via state government websites. The goal in these efforts, and also the challenge, is to provide users with more efficient access while ensuring that the electronic versions of primary legal materials are as "official" as their paper originals. The desire of state governments to make this a priority is strong. However, they currently lack the necessary policies and management practices necessary for success. State legislators and their staffs, legislative reference librarians, state archivists, and chief information officers all have important roles to play in laying the foundation for these efforts through the creation of new policy, management, and technology capabilities. This brief provides background to the recently approved Uniform Electronic Legal Material Act (UELMA), explores the concepts behind authenticated electronic materials, defines what it will take to create, maintain, and make available official electronic legal material, and provides recommendations for states.

Journal Articles and Conference Papers (10)

Creating Open Government Ecosystems: A Research and Development Agenda

Future Internet, Vol. 4, No. 4, Oct 2012

In this paper, we propose to view the concept of open government from the perspective of an ecosystem, a metaphor often used by policy makers, scholars, and technology gurus to convey a sense of the interdependent social systems of actors, organizations, material infrastructures, and symbolic resources that can be created in technology-enabled, information-intensive social systems. We use the concept of an ecosystem to provide a

framework for considering the outcomes of a workshop organized to generate a research and development agenda for open government. The agenda was produced in discussions among participants from the government (at the federal, state, and local levels), academic and civil sector communities at the Center for Technology in Government (CTG) at the University at Albany, SUNY in April 2011. The paper begins by discussing concepts central to understanding what is meant by an ecosystem and some principles that characterize its functioning. We then apply this metaphor more directly to government, proposing that policymakers engage in strategic ecosystems thinking, which means being guided by the goal of explicitly and purposefully constructing open government ecosystems. From there, we present the research agenda questions essential to the development of this new view of government's interaction with users and organizations. Our goal is to call attention to some of the fundamental ways in which government must change in order to evolve from outdated industrial bureaucratic forms to information age networked and interdependent systems.

Beyond Open Government: Ontologies and Data Architectures to Support Ethical Consumption

6th International Conference on Theory and Practice of Electronic Governance (ICEGOV2012) , Oct 2012

Two important trends on openness are promoting improved accountability from government and private organizations. The case of private transparency finds its roots in consumer and other stakeholder movements. The open government movement in the US is looking for alternatives to "smart disclosure," which implies providing consumers with better information to make better buying choices. We explore current knowledge on ethical consumption, as well as two influential technological tools to support consumer decisions. Our initial discussion suggests that the use of ontologies and data architectures, together with the appropriate policy environment and governance system, may solve some of the current problems identified.

Information Sharing and Financial Market Regulation: Understanding the Capability Gap

6th International Conference on Theory and Practice of Electronic Governance (ICEGOV2012) , Oct 2012

In testimony on April of 2012 before the House Financial Services Committee, U.S. Securities and Exchange Commission (SEC) Chairman, Mary Schapiro, stated that effective information sharing between financial market actors and their regulatory bodies is critical to fulfilling the regulatory obligations of the SEC. The 2008 financial crisis is recognized as a show case for the risks to the stability of the markets that ineffective information sharing among supervisory authorities represents. This paper constitutes a preliminary exploration of the challenges facing financial regulators building on prior research in the computing and information science community (CIS). Current literature as well as data from a recent study of financial market regulation is used to identify key actors in financial market regulation information sharing relationships and to begin to outline the challenges faced in this unique context and the resulting risk if those challenges go unaddressed. A recently developed theoretical framework for cross-boundary information sharing (Garcia et al 2007) is used to present insights about challenges and risks from the literature and the field.

Transforming City Government: A Case Study of Philly311

6th International Conference on Theory and Practice of Electronic Governance (ICEGOV2012) , Oct 2012

This paper describes the transformation of a city government led by a 311 program, which provides a consolidated channel for non-emergency services and information. The paper first discusses the concept of "smart city" as a foundation for the examination of the 311 program as a practice of government innovation. The paper then presents the details of the 311 program as it is being instantiated in the City of Philadelphia. In-depth interviews with city government officials and managers responsible for operating the city's 311 system (Philly311) offer insights into the contributions the system is making to a more efficient, effective, transparent, accountable, and collaborative city government. Performance data provided by Philly311 enables more efficient resource allocation and informed decision making. Philly311 is credited with making the process of service delivery more transparent to the public, and providing traceability of requested services imbues service departments with a sense of accountability. Service level agreements are providing measurable standards of municipal services and are used to support accountability in terms of service status. Regular reviews of service level agreements and content of the system promote interdepartmental collaboration. 311 systems are broadly recognized as powerful tools to engage residents in improving their neighborhoods. Interviews also revealed challenges Philly311 is facing including limited funding impeding further improvements in software, systems, and staffing, and provided

some insights into innovative strategies for addressing resource constraints. Institutionalizing interdepartmental collaborations also emerged from the interviews as a critical new capability required for advancing from the initiation stage of Philly311 to the operational, expansive, and sustainable stages. **[Winner of Best Innovations in Practice Paper Award, ICEGOV2012]**

A Stakeholder Analysis of Interoperable Data Architecture: The case of I-Choose

Proceedings of the 13th Annual International Conference on Digital Government Research (dg.o2012) , Jun 2012

This paper presents the challenges associated with developing a data architecture supporting information interoperability in the supply-chain for sustainable food products. We analyze information elicited from experts in the supply-chain for organic and fair trade coffee to identify relevant stakeholders and the issues and challenges connected with developing an interoperable data architecture. This study assesses the salience of individual stakeholder groups and the challenges based on the stakeholders' attributes in terms of power, legitimacy and urgency. The following five issues/challenges were found to be the most salient, requiring primary focus in developing interoperable data architecture: trust in data, cost to maintain the system, political resistance, oversight and governance, and the cost to consumers in terms of time and effort. In the conclusion we discuss potential future research and practical implications for designing an interoperable data architecture.

Understanding the Value and Limits of Government Information in Policy Informatics: A Preliminary Exploration

Proceedings of the 13th Annual International Conference on Digital Government Research (dg.o2012) , 7, 2012

Policy informatics is an emergent area of study that explores how information and communication technology can support policy making and governance. Policy informatics recognizes that more kinds, sources and volumes of information, coupled with evolving analytical and computational tools, present important opportunities to address increasingly complex social, political, and management problems. However, while new types and sources of information hold much promise for policy analysis, the specific characteristics of any particular government information resource strongly influences its fitness and usability for analytical purposes. We therefore contend that information itself should be a critical research topic in policy informatics. This poster presentation shows how different aspects of information conceptualization, management, quality, and use can affect its "fitness" for policy analysis.

Full Information Product Pricing Regimes: Policy Implications for U.S.-Mexico Sustainable Commerce

The Puentes Consortium, Apr 2012

Current trends in making supply chains more transparent and bringing information usually not available to the consumer and other players into the market are changing the ways in which consumers make decisions about the goods and services they buy. One example of these changes is the networks of consumers, producers, and other players in the supply chain sharing value-adding information packages about the social and environmental impacts of the products they exchange, or Full Information Product Pricing (FIPP) Networks. Our current research suggests that these FIPP Networks have the potential to promote market-driven approaches to international trade systems, which may work as a complement to more traditional state-led trade systems, such as the North American Free Trade Agreement (NAFTA), in promoting sustainable trade. We envision that such an approach should involve collaboration among government, supply chain and sustainability experts, industry associations, and consumer organizations sustained by a technological architecture to support interoperability and information sharing. We discuss important trade-offs related to costs and sustainability, privacy, and access to information. The paper finishes with a set of recommendations involving the creation of a governance system to promote this market-driven approach to sustainable international trade.

Exploring the Motive for Data Publication in Open Data Initiative: Linking Intention to Action

Proceedings of the 45th Hawaii International Conference on System Sciences - 2012, Jan 2012

This research study was designed to broaden understanding of the publishing of research datasets by distinguishing between the intention to share and the action of sharing. The data was generated from preliminary survey results conducted by DataONE work groups. The final data used in this paper is based on 587

observations. The analysis results show support for all of the path coefficients of the theoretical model except for the path of perceived self-efficacy, and legal context and policy variables. The intention to share a dataset was found to be a significant determinant in the action of sharing data. Acknowledging the key determinants of intention to publish datasets arguably entails significant policy implications on data sharing.

Understanding Smart Cities: An Integrative Framework

Proceedings of the 45th Hawaii International Conference on System Sciences - 2012, Jan 2012

Making a city “smart” is emerging as a strategy to mitigate the problems generated by the urban population growth and rapid urbanization. Yet little academic research has sparingly discussed the phenomenon. To close the gap in the literature about smart cities and in response to the increasing use of the concept, this paper proposes a framework to understand the concept of smart cities. Based on the exploration of a wide and extensive array of literature from various disciplinary areas we identify eight critical factors of smart city initiatives: management and organization, technology, governance, policy context, people and communities, economy, built infrastructure, and natural environment. These factors form the basis of an integrative framework that can be used to examine how local governments are envisioning smart city initiatives. The framework suggests directions and agendas for smart city research and outlines practical implications for government professionals.

Transnational Public Sector Knowledge Networks: Knowledge and Information Sharing in a Multi-Dimensional Context

Government Information Quarterly, Volume 29, Issue 1, Pages 112-120, (special issue) 2012

Sharing of knowledge, information, and practices across cultural and national boundaries has become a means to address critical global problems. As government agencies increasingly collaborate with international counterparts on these issues, transnational knowledge and information sharing networks grow in importance as mechanisms for collaboration. This paper explores the nature of Transnational Public Sector Knowledge Networks (TPSKNs) and identifies critical contextual factors that shape their performance. In these networks, each participating organization operates within complex national, organizational, and information contexts. The contextual differences between participants produce distances in culture, politics, intentions, organizational factors, relationships, knowledge, resources, geography, and technology. These distances influence their ability to engage in the processes and interactions that are essential to network performance. The paper concludes with a conceptual dynamic model that accounts for the relationships among these factors which can guide further research in understanding knowledge and information sharing across national and cultural boundaries.

Book Chapters (1)

Assessing the Value of Investments in Government Interoperability

In Pallab Saha (Ed.) *Enterprise Architecture for Connected E-Government: Practices and Innovations*. Jan 2012 IGI Global .

Government investments in enhancing the interoperability of ICT systems have the potential to improve services and help governments respond to the diverse and often incompatible needs and interests of individual citizens, organizations, and society at large. These diverse needs and interests encompass a broad range of value propositions and demands that can seldom be met by single programs or assessed by simple metrics. The diversity of stakeholder needs and the complexity inherent in interoperable systems for connected government require an architecture that is up to the task. Such an architecture must include the reference models and components that can accommodate and integrate large portfolios of applications and support multiple kinds of performance assessments. The value propositions that underlie the architecture’s performance assessment or reference model are fundamental. The propositions must be broad enough to span the full scope of the government program’s goals, a substantial challenge. In recognition of that challenge, this chapter puts forward two perspectives for assessing the value of interoperable ICT investments, incorporating outcomes beyond financial metrics. The first is the network value approach to assessment of investments in interoperable ICT systems for government. The second is the public value framework developed by the Center for Technology in Government, which expands on the network value approach to include a broader range of public value outcomes. These approaches are illustrated in two case studies: the I-Choose project designed to produce interoperable government and private sector data about a specific agricultural market and the government of Colombia’s interoperability efforts with expanded metrics based on the expansion of interoperability networks.

Issue Briefs (3)

Collaborative Data Sharing Networks

Mon, 17 Sep 2012

Research and even business is becoming a collaborative enterprise that brings together multiple institutions, sectors and, increasingly, different countries. No where is this more apparent than in the natural sciences where the phenomenon being examined and questions being asked are not contained in the borders of one discipline, institution, country, or continent. Both a reason for and often the purpose of collaboration in the sciences is the need to amass, maintain, and share large and diverse structured data resources that no one research team or institution has the resources or expertise to collect, make available, and maintain.

Open Data and Fitness for Use: A Realistic Look

Mon, 17 Sep 2012

The basic assumption of the open data movement is that more intensive and creative use of information and technology can improve policy-making and generate new forms of public and economic value. Open data initiatives are focusing on education, public health, transportation, environmental stewardship, economic development, and many other areas. Ironically, this information is often treated as a black box in the open data movement. Stakeholders, analytical techniques, and technology tools all receive considerable attention, but the information itself is often seen as a given, used uncritically and trusted without examination. However, the very kind of data that is now being released as “open data” was actually collected or created for other purposes. It has undeniable potential value, but it also contains substantial risks for validity, relevance, and trust.

3-1-1 for Smarter Governments

Fri, 14 Sep 2012

Cities across the U.S. are joining in a global movement to improve the quality of their decision making and planning through increased access to data and by integrating collaborative approaches to making that data more accessible to government officials as well as the public. In many larger cities, 311 service centers are becoming a core driver to building capabilities for service integration. Since the first 311 hotline launched in 1996 in the City of Baltimore, 311 service centers have rapidly spread across the country. 311 systems are providing quick and easy access to non-emergency municipal services and information through a single, consolidated channel that extends from the three-digit toll-free dial number (3-1-1) to any possible means that people can use to communicate with their municipal government; email, text messaging, social media, and more recently smart phone applications.