

A. Changing the Interface Between Government, Citizens, and Businesses

Providing access to government information is the most common example of [electronic] government.⁽⁹⁾ The benefits for citizens, businesses, and the public sector include reducing printing and mailing costs for collecting and disseminating information, expanding access from regular business hours to around the clock, and making it easier to keep information accurate and up-to-date.

Web sites are the most common vehicle for providing electronic access to public information. According to some estimates, there have been more than 10,000 government Web sites developed in the United States to date.⁽¹⁰⁾ These include the full array of federal, state, and local governments. Typically, these sites provide basic information such as the names of government officials, agency addresses and phone numbers, online publications, e-mail addresses, as well as other things pertinent to that particular government entity.

Telephone systems like 311 customer relationship management applications are also being implemented in many public sector organizations as a way to efficiently track and answer incoming requests for information and services. In Lynchburg, Va., a number of citizen phone calls about illegal drinking and drug activity went to different city departments, which responded independently or not at all. This prompted officials to revamp the way the city handles citizen complaints and requests. Now they have a centralized office that answers all incoming calls from residents. Trained representatives direct calls to appropriate departments and tell citizens how long it will take to fix a problem.⁽¹¹⁾

The newest interfaces between government, citizens, and business are Web portals, which provide a centralized point of access to government information and services across different agencies. The federal government's Firstgov Web site and the New York State homepage both operate under the portal concept by providing access to agencies, departments, and organizations across government through one site.

B. Changing the Way Work Gets Done in Government

The gradual transformation of government business is taking place on many levels. When government began implementing information systems to manage their information, they developed them on an agency-by-agency, or program-by-program basis. Each agency built their own system for a specific agency or program purpose, not to be connected across the agency or government to other systems. This phenomena has become known as the silo or stovepipe approach because the business and systems is viewed up and down and not across. One of the visions of e-government is to break down these silos, integrating business processes, service programs, and streamlining information management.

Many times the best solution to a problem has nothing to do with technology and everything to do with the way work is being done. Business process reengineering often accompanies technological implementation. The words "government bureaucracy" produce the image of paper-laden processes that are both people and time intensive. It may not be efficient, but that's the way we've always done it, is one of the arguments. That was the case when the New York State Department of Motor Vehicles set out to reduce the amount of time it took to process titles. Before investing in a costly document imaging system, the agency conducted a thorough workflow analysis that demonstrated how a 20-step process could be cut by more than half while substantially reducing the process time.⁽¹²⁾ While the answer to improving DMV's slow paper process was not electronic government, it was the technology that provided the incentive to examine the process and explore different ways it could be improved.

The e-government vision is a vision of integrated information and services. Information collected by state and local government agencies can be a valuable resource on which to build e-government programs. Thousands of files, databases, and data warehouses have been developed. But they aren't always compatible and in many cases contain duplicate information, which makes sharing and integrating data a great challenge. Besides new business processes, changes in policy, security, and information management are called for to "share information across agency and program boundaries, to discover patterns and interactions once hidden in millions of separate paper records."⁽¹³⁾

When New York State's Bureau of Shelter Services in the Office of Disability and Temporary Assistance set out to build a prototype Homeless Information Management System (HIMS) to help government and nonprofit organizations in program planning and decision-making about homeless services in the state, the effectiveness of the prototype relied on the willingness of the necessary parties to share information.

New models of collaboration for achieving e-government are popping up everywhere. In Bremen, Germany, a public-private partnership between city government and private industry works together to provide Web-based

III. E-Government Is Already Changing the Way Government Works

services to citizens. The Foundations Project in Minnesota used a multi-agency collaboration to develop a Web site that provides environmental and natural resource data.(14)

IV. Some obstacles to realizing the vision, and how to overcome them

E-government promises some striking opportunities to improve the business of government, but this vision is not without a series of real obstacles. Hurdles such as citizen awareness of electronic services and information, the "digital divide," and an exodus of skilled workers must be overcome to get from where we are today to the vision of e-government. According to a study conducted by Brown University, "Government Web sites are not making full use of available technology, and there are problems in terms of access and democratic outreach."(15) Overcoming these obstacles will take a special kind of leadership that is eager to get involved and initiate change.

People can't participate in electronic government if they don't know it's there. While 84 percent of government officials said the Internet has improved their outreach to citizens, only 34 percent of citizens are somewhat familiar with e-government, according to a Hart-Teeter poll conducted for the Council for Excellence in Government last November. That number is only a slight increase from the 29 percent who were familiar with e-government the year before. This lack of awareness must be addressed for the benefits of e-government to be realized.

The citizens who need government services most are also those without ready access to the Internet. A gap, commonly known as the "digital divide," exists between those households that have access to the Internet and online services and those that do not. E-government services are ineffective when citizens don't have the necessary computers and Internet connections to use online information and services.

Skilled workers are either aging out or opting out of government. The brain drain of highly skilled government IT workers is a concern on many levels. According to civic.com, a Council of State Government poll said that 47 of 50 states reported a shortage of IT workers. Experienced people who have worked with an agency's technology systems for the past decade or two are retiring or leaving for better pay in the private sector. Competition between government and private companies for new graduates with new skills and for seasoned professionals with deep experience continues to be a challenge.

Overcoming these obstacles requires committed leadership to provide the direction and political will necessary to promote change. "To be an effective leader in our networked world, you need to engage IT issues. You need to play a key role in establishing strategic direction, implementing specific projects, and formulating new public policies," according to a report from the Kennedy School of Government at Harvard University.(16)

An example of this leadership is Tom Ridge's recent call for an increased focus on integrating information across all levels of law enforcement. As the Director of Homeland Security, Ridge says he wants to do away with the turf battles that have historically pitted policing agencies against one another.(17) Sustaining this effort, or sustaining any other e-government initiative, will take ongoing and committed leadership.

Whether we like it or not, information technology and electronic government initiatives are transforming the public sector. Change is in the air. The government that serves our children and grandchildren will be much different than the one that served our parents. Just how different is impossible to predict, but the countless e-government projects underway today provide many clues.

(9) Sharon S. Dawes, et al., *Some Assembly Required: Building a Digital Government for the 21st Century*, Center for Technology in Government, March 1999, at <http://www.ctg.albany.edu/resources/abstract/abdgfinalreport.html>.

(10) Christopher Baum & Andrea Di Maio, *Gartner's Four Phases of E-Government Model*, Governing.com. (2000) available at <http://www.gartner.com> (last visited March 8, 2002).

(11) Tod Newcombe, *Customer Satisfaction*, Gov't Tech., March, 2001, at 14, available at <http://www.govtech.net/magazine/story.phtml?id=2530000000001255&issue=03:2001>.

(12) Peter A. Bloniarz & Mark Nelson, *Title Imaging Project with NYS Department of Motor Vehicles*, Center for Technology in Government, Nov. 1994, at <http://www.ctg.albany.edu/resources/abstract/dmv94-1.html>

(13) Sharon S. Dawes, *Interagency Information Sharing: Expected Benefits, Manageable Risks*, 15 J. Pol'y Analysis & Mgmt. 377, 377 (1996).

(14) Eileen Quam, *Informing and Evaluating a Metadata Initiative: Usability and Metadata Studies in Minnesota's Foundations Project*. 18 Gov't Info. Q. 181, *passim* (2001).

(15) West, *supra* note 5.

(16) Kennedy School of Government, *Eight Imperatives for Leaders in an Electronic World* 10 (Harvard Project Group 2001), available at <http://www.ksg.harvard.edu/stratcom/hpg/eightimp.pdf>.

(17) Tom Ridge, Address to the National Press Club, (Feb. 7, 2002), available at <http://www.npr.org/programs/npc/020207.tridge.html>.