

Digital Government: The Next Step to Reengineering the Federal Government¹

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Introduction

*"I have in general no very exalted opinion of the virtue of paper
government."*

Edmund Burke

Imagine a future in which citizens can log onto one Internet site, easily find the government services they are looking for, and use that site to conduct an online transaction; a future in which businesses fill out one Internet form for all their local, state, and federal environmental regulatory compliance requirements; a future in which government officials make all purchases and payments electronically, saving millions of dollars. The technology for all these applications and others is here today, waiting to be adopted by the federal government.

Indeed, these technologies are rapidly spreading in the commercial sector. The economy is evolving to the point where a significant share of economic transactions will soon be conducted through electronic means. Digital technologies are fundamentally transforming our economy and society, and have the potential to transform government. In fact, a key next step in reinventing government involves the widespread application of information and communications technology to the delivery of government services—in short, fostering digital government.

Among the potential benefits of digital government are savings in money and time for the government, consumers, and businesses. If banks can cut their transaction costs by 90 percent through online banking, similar savings for government are likely. Moreover, users of government services will benefit by greater 24x7x365 access to higher quality services. Most importantly, the relationship between government and citizens can evolve from its traditional hierarchical and arms-length one to a more reciprocal one where citizens are genuine stakeholders in their government.

Done right, digital government promises to transform Industrial Age big government into Knowledge Age smart government. Old economy government was organized around agencies and bureaucracies that operated like "stove pipes" with little information flowing between them, and with operations developed to meet the requirements of agencies, not the needs of citizens. New Economy government will be organized around the functions and the needs of citizens; with information and communication technologies a key enabler of this reinvented government.

Moving to digital government will speed the transition to a digital economy. Part of why this transition is not proceeding even faster is because of "chicken or egg" issues. For example, smart cards have diffused slowly through society, in large part because consumer value is limited as long as few merchants accept them, and few merchants accept them as long as few consumers have them. Similar issues exist with regard to digital authentication, educational software, and to some extent the Internet itself. These impasses will be broken, but if the federal government became a leading-edge, or even "middle-edge," user of information technology (IT), it would enhance the value of being online and speed the transition.

Despite the obvious promise of digital government, it has only recently become a priority of most policy makers. Until the last year, the issue has remained the province of technologists focused on technically complex issues not readily understandable to policy makers, much less to citizens in general.

In part because of this technocratic focus, digital government progress to date has been slow and not linked to government reinvention. Rather, most IT applications have focused on improving the efficiency of existing operations or providing one-way information dissemination, instead of on fundamentally changing the way businesses and citizens interact with government. As a result, another kind of digital divide is emerging—between government, which is only moving tentatively into digital operations, and the commercial sector, which is moving at “web-speed” into e-commerce.

This report lays out the overall direction the federal government should take to foster digital government and describes how the government can use IT to transform its operations. It first discusses the factors that have slowed progress to date and then describes 12 key principles to follow in implementing digital government. Finally, it lists four major policy recommendations for implementing digital government.

Impediments to Faster Progress Toward Digital Government

At the federal level, considerable progress has been made toward establishing a vision for digital government and providing information to the public through agency web sites. But, relative to the capabilities of the technology, much more can be done. There are at least four factors that have hindered progress: 1) lack of top-level agency and government-wide leadership; 2) lack of funding and flexibility to implement digital government projects; 3) the prevalence of a traditional “agency-centric” government paradigm, rather than a customer-centric one; and 4) lack of pressure for change.

A Lack of Political Support for Digital Government

Congress and the Clinton Administration have issued broad and generalized mandates regarding digital government. However, congressional committees have largely ignored the issue. While the Clinton Administration articulated progressive goals and began projects—including innovative efforts from Vice-President Gore’s National Performance Review dating back as far as 1995—more needs to be done. Nor has OMB been a strong advocate of digital government. Within agencies, Chief Information Officers (CIOs) normally do have the authority and budget to implement significant digital government applications.

However, there are signs that digital government is receiving increased attention, both in Congress and the Administration. President Clinton issued an executive memorandum on the subject in December 1999, and the President’s Management Council has adopted the issue of digital government as one of their three top priorities for 2000. Both candidates for President made a commitment to implementing digital government. During his campaign President Bush adopted several of PPI’s recommendations, calling for the creation of a federal CIO and a \$100 million dollar digital government in fund. In Congress, Senator Joseph Lieberman (D-CT), and ranking Democrat of the Senate Governmental Affairs Committee is planning to introduce legislation in 2001. Congressman Jim Turner (D-TX), ranking Democrat on the Government Management, Information, and Technology Sub-committee of the House Committee on Government Reform, and Congressman Jim Davis (R-VA) introduced legislation in 2000 to advance digital government. Both are planning on introducing digital government legislation in 2001.

Notwithstanding recent efforts, it has up until now been hard to make needed progress, particularly to develop cross-agency applications. Currently, each federal agency has an individual

information technology plan, usually created without regard to the need to develop cross-agency applications. Compatibility on a government-wide scale was not the original aim of government IT use and has resulted in a cacophony of systems—proprietary, and non-proprietary; and common and rarely used software and hardware.

While inter-agency IT compatibility issues are important, so is the incompatibility of systems within individual agencies. For example, some employees at the State Department have to use up to three computer terminals to accomplish tasks, because of incompatible applications and systems.

Concerted top-level leadership in both Congress and the Administration is necessary to harness contemporary technology to bring government into the 21st century. Leadership is also needed to foster inter-agency solutions. A number of committees and organizations work to foster government IT coordination. The National Partnership for Reinventing Government (NPR) has attempted to develop a number of cross-agency applications, and the Government Information Technology Services Board was created in 1993 to help implement NPR's recommendations. Similarly, the Chief Information Officer Council, made up of 54 CIOs or deputy CIOs from federal agencies, meet as an interagency forum to direct the implementation of federal IT resources. The Office of Intergovernmental Solution's Intergovernmental Advisory Board and the General Services Administration have also worked to develop innovative cross-governmental technology systems.

But these interagency groups suffer from several distinct limitations. First, they lack the resources to implement government-wide efforts. Second, they are largely a meeting of equals, and lack the authority to impose central direction on individual agencies. Moreover, their primary focus remains on their individual agencies, not on government-wide reinvention. Third, without strong cabinet-level support, CIOs are limited in what they can get done, especially if it involves reengineering government. Fourth, because OMB itself is organized by stovepipe it has done little to promote cross-agency, enterprise-wide initiatives.

A final reason why elected and appointed officials have not done more to promote digital government until recently is because the private sector has done little to push for it. Unlike their support for important issues such as encryption export control reform, copyright protection, and digital signatures, business has been virtually silent when it comes to advocating digital government. Without the strong support of the technology business community, it is easy for policy makers to put this issue on the back burner, or to treat it simply as a narrow technical issue affecting government alone. The technology business community needs to educate Congress and the Administration as to why moving to a digital government is a critical step in the overall evolution to a fully networked, digital economy.

Lack of Funding and Flexibility

Government is being asked to manage paper and face-to-face government while at the same time creating a new digital government, but often without additional resources to do the job. While it is true that digital government saves money, there are short term costs for technology and project management. Moreover, agencies are limited by Congress and OMB in the amount of flexibility they have to reprogram funds toward digital government initiatives.

When funding is provided, it is usually to individual agencies. There is a conspicuous lack of funding for cross-agency applications and agencies are not apt to use their limited funds for them. Yet to effectively implement many digital government functions, government must take an enterprise-wide management perspective (whether it's delivering monetary benefits to the public, organizing cross-agency or individual agency databases, or developing government portals). This unwillingness to fund cross-agency projects is a principal reason why the development of the International Trade Data System has stalled, as the Customs Service has lobbied for funds for its

own proprietary system. Similarly, when the Small Business Administration sought to develop a single point of entry where small businesses who interact with numerous federal agencies could enter their data just once and have it shared with the various agencies, resistance by individual agencies scuttled the initiative.

An “Agency-centric” Rather Than a “Customer-centric” Paradigm Prevails

Government services are funded on an agency-by-agency basis. Congressional committee jurisdiction and OMB agency budget allocations sustain this stovepipe focus. Within Congress, committees and subcommittees focus on individual agencies, as does the oversight system. There are few means in Congress to take an enterprise-wide perspective.

However, the IT revolution provides the opportunity to reengineer government and to allow government services to be organized in ways that fit the needs of customers rather than the requirements of bureaucracies. Yet, because government officials usually view the world through an agency, or even bureau perspective, developing the will to create and implement digital government solutions organized around customers’ needs has proven difficult.

As former President Clinton stated in his recent memorandum on electronic commerce: “There has not been sufficient effort to provide government information by category of information and service—rather than by agency—in a way that meets people’s needs.”² For example, many of the required forms for exporting can be downloaded from the Internet, printed, and mailed to the respective offices. While the online forms expedite the process considerably, it would be much more efficient if all of the pertinent information from various agencies were available in one form and automatically routed to the correct agencies at the push of the “submit” button.

This is not unique to the United States. A recent survey of UK citizens on digital government reported, “There is . . . a strong belief that [government] services have traditionally been developed from the producer rather than the user perspective and this has induced a feeling of powerlessness in dealing with government.”

Just as the Internet threatens to disintermediate large sectors of our economy (for example, it has put out of business some brick and mortar retailers, middlemen, stockbrokers, etc.) it also threatens to disintermediate some government functions. For instance, some in government have justified their positions by controlling and doling out information. Yet, by providing information freely on demand, digital government makes these functions obsolete. Only top-level leadership can overcome the resistance of government bureaucrats to potentially disruptive changes.

Lack of Competitive Pressures Forcing Change

Commercial e-commerce companies face enormous pressures to innovate, to be the first to commercialize applications, and to gain market share as rapidly as possible. As a result, in the frenetic Internet economy people talk about technological and commercial evolution in “Web years” (three months time) because the rules seem to change that often. In contrast, the federal government does not face these pressures, and because of this, has not operated with anywhere near the same speed and intensity as e-commerce companies. As a reflection of this, one federal official recently stated, in an informal context, that the federal government could afford to go slow because the Internet marketplace just wasn’t big enough to justify an aggressive pace.

12 PRINCIPLES FOR IMPLEMENTING DIGITAL GOVERNMENT

The Progressive Policy Institute offers the following 12 principles for implementing digital government.

1) Think Customer, Not Government Agency

Digital government both enables and requires rethinking how government is organized from the perspective of the citizen and the functions government performs to serve the needs of its citizens. A system based on functionality rather than agency jurisdiction, will lead to a more intuitive and efficient process of government-customer interaction where information is collected once and government functions are integrated. To do this, government must focus on customer requirements first and then work backwards to design systems that best meet those needs. The strategy should support the streamlining and integration of processes across the boundaries between government departments and agencies, so that those boundaries are invisible to the customer. This also means streamlining the processes between levels of government—federal, state, and local—so that cross-government applications are developed. Doing this will begin to reinvent the government’s relationship with the public and will recognize citizens as real stakeholders. It will also raise citizen expectations of their government. Some nations have begun to use IT to reorient their government this way. For example, Australia called its report on digital government: Clients First: The Challenge For Government Information Technology.

2) Reinvent Government, Don’t Simply Automate It

If digital government is viewed simply as a technology solution and is used to merely automate routine tasks, it will have failed to live up to its potential. Digital government must be part and parcel of government reinvention. The technologies need to be used to simplify government processes, drive internal change, and reorganize government.

For example, the Environmental Protection Agency is experimenting with allowing companies to file compliance forms online. But if the technology only makes the shift from scores of paper forms to scores of electronic forms it will not have taken advantage of the opportunity to use IT to reengineer government and move toward multi-media regulation (such as focusing on air, water, and solid waste emissions collectively).

3) Set An Ambitious Goal

In order to transform the federal government to a digital government, it is necessary to set an ambitious goal to be met in the near future. For example, Australia seeks to deliver all appropriate services on the Internet by 2001. British Prime Minister Tony Blair declared in October 1997 that “within five years, one quarter of dealings with government can be done by a member of the public electronically—through their television, telephone, or computer.” The 1998 Government Paperwork Elimination Act requires each federal agency to make its forms available for electronic submission by 2003 (through use of a digital signature when necessary).

4) Invest Now to Save Tomorrow

Investment in digital government will yield high returns as more time- and cost-efficient systems are developed. However, Congress and the OMB too often view digital government appropriations simply as one expenditure competing against others. Moreover, appropriators usually expect immediate staff reductions from digital government, which are not possible until new systems are online and debugged, and the user community has switched. Expenditures on digital government need to be viewed as investments with positive returns in the near term.

5) Focus on Digital Transactions Between Citizens and Government

Internet enabled services should be the driver of digital government reengineering for the next five years. The growing popularity and availability of the Internet provides an unparalleled opportunity for the government to vastly improve contact with the American public. Government should ensure that all possible government-citizen and government-business interactions that can be transacted online are available.

6) Make Government Applications Interoperable with Commercial Ones

The driving force of information technology is interoperability—the basic foundation of the Internet. In embracing digital government, the government needs to make its systems interoperable

with commercial ones rather than force the public to develop two separate systems—one for government use and one for private use. Interoperability makes the process of interaction more efficient, easier, less confusing, and cheaper for all parties involved. It also helps to resolve the chicken and egg problems slowing deployment of these technologies in the commercial marketplace.

7) Pass on a Portion of Savings From Electronic Transactions Back to Citizens

Digital government will save government money and these savings should be reflected in the “price” people pay for interacting with government. For example, Massachusetts offers a five dollar rebate on their driver’s licence fee for those who register online, since it saves the state much more. Providing rebates and discounts will encourage citizens to choose these lower cost forms of interaction. A United Kingdom survey found that a large proportion of the population is willing to use information technologies in interacting with government irrespective of their current knowledge or familiarity, provided that it offers benefits—including cost savings—to them.

Yet, the U.S. Government has not done this. For example, the U.S. Postal Service (USPS) will not give discounts to users of “electronic stamps” or postal meters, even though they cost the Postal Service less than purchasing stamps at a post office. Similarly, the IRS will not give a rebate for electronic tax filing.

Some argue that providing discounts will only benefit the affluent since they are now more likely to be on the Internet. Yet by lowering the actual cost of Internet access, rebates and discounts for online transactions (both government and commercial) will probably do more to get low-income Americans online than any other factor.

8) Promote Access to Information on the Internet, Do Not Restrict It

Moving to digital government will lead to issues regarding security and privacy. But if handled properly, these issues should be no more problematic than those faced in the current era of paper government. Yet, in the face of privacy concerns, elected and Administration officials can overreact, stymying progress. For example, a bill was introduced in the last Congress (HR1330) to prohibit government from providing information over the Internet. Rather than restricting online access to information, government should promote it and ensure that adequate security and privacy measures are in place.

9) Respect the Rights of Americans for Information Privacy

Some government entities have treated personal citizen information as belonging to the state, and have engaged in the practice of selling such information to the highest bidder, without citizen permission or knowledge. Examples have included prominent cases involving state driver’s license lists and databases which have been sold to third parties. The Supreme Court has ruled that such activity is unlawful, rejecting the defense by government that it ought to have the latitude to continue such practices.

As we make the transition to digital government, policies need to be put in place which ensure the privacy of the personal information of individual citizens. These issues are being addressed in the private sector through self-governance initiatives, including detailed “best practices” certifications by groups as Trust-E and BBB-OnLine. Governments should do no less to ensure that their own practices respect the privacy of citizens. In addition, as the federal government becomes more digital, it needs to ensure that it has top-quality security systems in place which protect the integrity of information against hackers and other threats. Specific policies of this sort, and funding to support them, are necessary to help instill public confidence in governments’ intentions in the evolving Information Age.

10) Online Access to Government Should Not Eclipse Traditional Means

All services that can be provided digitally should be. However, at least for the foreseeable future, federal services should remain accessible through all forms of communication, including mail, phone, and in person, for those who cannot or do not wish to communicate digitally. For example, an individual should still be able to call the Social Security Administration office to find out how to apply for benefits, even when the information and application process is online.

11) Federal Efforts Should Complement, Not Duplicate Private Sector Efforts

In OMB Circular A-76, nine successive American presidents, beginning with Dwight Eisenhower, have set forth a policy regarding the relationship of government to the performance of “commercial activities.” That policy is well-summarized in one sentence: “A commercial activity is not a governmental function.”

As the federal government ventures into digital government it needs to remember the A-76 guidelines. In some instances, government agencies have recently pursued strategies where good electronic government ideas have evolved into electronic commerce initiatives, where the government took on a role of providing commercial products or services to consumers in competition with the private sector. Whether the subject is the USPS and electronic bill presentment and payment, or a state agency with electronic tax preparation services, or a federal department wanting to commercially sell its electronic payroll services, these forays cross the line into electronic commerce.

For example, it is one thing for government to provide tax forms in electronic format (as they already do in paper format), it is quite another to provide tax preparation software that mimics the functions of tax preparers. Similarly, it is one thing for the USPS to use information technologies to support its mission of delivering physical mail. It is quite another to become an Internet Service Provider. For example, the USPS has announced an interest in entering the market for electronic bill presentment and payment services. Yet, it is not appropriate for the USPS to unilaterally expand its charter beyond the delivery of physical mail and packages and to compete with private sector companies already providing such services as e-mail, electronic carrier services, electronic certificate authorization, or electronic bill presentment and payment.

The justification government agencies often make for such efforts is that they are simply acting more like private corporations, and after all, isn't this the goal of government reinvention? Yet, when reinventing government advocates argue that government should operate more like a business, they mean that it should become efficient, faster, and more customer-oriented in its delivery of services—not that it should effectively go into business and use public funds to competitively provide commercial goods and services in private markets.

As a result, digital government efforts should be focused on those innovations and initiatives which are necessary to fundamentally improve service to the citizen in inherently governmental functions, and to provide significantly better access to public information resources. Public funds, whether appropriated by Congress or generated through systems such as the Postal Rate Base, should not be used as venture capital to launch governmental agencies into competition with the private sector. There are too many necessary functions of government which are either going unfulfilled, or are being poorly performed in outmoded ways, to be able to justify in an era of limited budgets spending taxpayer dollars on activities which fundamentally change the role of government in our economy.

12) Take Action Now, and Learn From Mistakes

The IT revolution is changing so rapidly that waiting until the “perfect” comprehensive system can be developed will mean that any solution will be out of date by the time it is implemented. Government needs to move forward with smaller projects that, if successful, can be scaled up. Moreover, failure should be seen as an opportunity to learn what does not work, and not necessarily something to be penalized.

POLICY RECOMMENDATIONS

To accelerate the pace of transformation we recommend that the Congress and the Bush Administration do four major things to foster digital government:

1. Establish the Position of a Chief Information Officer for the Federal Government
2. Establish a \$500 Million Annual Digital Federal Government Fund to Invest in Cross-Agency Digital Government Projects
3. Give Agencies the Flexibility in the Use of Funds for Digital Government and Let Them Keep the Savings Generated by It
4. Expand Funding for Agencies to Develop Digital Government Applications Establish the Position of a Chief Information Officer for the Federal Government

Establish the Position of a Chief Information Officer for the Federal Government

Currently, 54 federal agencies have CIOs, but the federal government as a whole does not. Current coordination efforts are just that, meetings among equals without the budget or authority to implement government-wide digital government solutions. A federal CIO would report directly to the President and direct the process of developing a concerted digital government conversion plan. He or she would have a budget independent of individual agencies to help drive the next generation of digital government, much of it involving cross-agency applications. The CIO would head inter-agency and cross functional IT councils. The office would also take the lead in shaping the Administration's policy regarding the Internet, oversee issues of computer and network security for the government, and work with state and local governments to promote digital government. Just as the Y2K "tsar" was able to assert strong leadership in dealing with a potential Y2K crisis in government, a federal CIO and a comprehensive plan will foster digital government in a faster, more effective, and more comprehensive manner.

A number of states and nations have moved in this direction, appointing technology directors. For example, British Prime Minister Tony Blair has appointed an e-minister to coordinate the various departments involved in developing digital government as well as carry out e-commerce initiatives to improve service to the citizens.

Establish a \$500 Million Annual Digital Federal Government Fund to Invest in Cross-Agency Digital Government Projects

Agencies generally have not funded interagency digital government projects. Similarly, appropriations by both Congress and OMB is organized by department, not function, so finding allocations for cross-agency projects is difficult. Only a small amount of funds for agency pilot projects has been allocated. But while pilot projects can get programs launched, they are not able to sustain them or develop them on the scale needed. Providing a pool of funds specifically targeted at implementing significant cross-agency projects would not only provide the resources to implement such projects, it would provide the organizational direction to get them done. However, to ensure agency buy-in, agencies should be required match these funds. And Congress should allocate funds to agencies specifically targeted to joint projects.

Give Agencies Flexibility in the Use of Funds for Digital Government and Let Them Keep the Savings Generated by It

Digital government will save money, but where will the government get the money to implement this innovation? There is a model from the private sector. A number of computer/IT service firms, led by IBM and EDS, contract for these services with companies and, in effect,

guarantee productivity gains to the firm. In return, companies are compensated out of a portion of the client firm's productivity gain.

Current law allows federal agencies to contract for energy efficiency technologies that will lower energy costs, with the contractor being paid out of the agency's energy cost savings. In this way, the agency doesn't have to invest up-front appropriated monies in efficiency saving technologies. Rather, it can pay for them over time with a part of the cost savings. The Clinger-Cohen Act of 1996 similarly allow federal agency pilot experiments with such "shared savings" contracting in the information technology area.

The information technology provision hasn't been used yet, probably because there is no "up side" for the agency—it has to return any savings to the Treasury, and can't use savings to enhance its mission responsibility. But if that provision were fixed, and if broader demonstrations were permitted (rather than just the two pilots the law currently allows), this might be a significant way to expand digital government. In particular, agencies should be allowed to earmark the savings from digital government to their own innovation funds to finance further digital government initiatives.

In addition, governmental agencies should be given increased flexibility regarding digital government-related procurement. The Administration should identify pilot digital government projects that meet certain requirements, and develop new acquisition and procurement methods for them that are faster and more flexible. For example, in 1999 Congress gave the Central Intelligence Agency the authority and funding to create a \$28 million "venture capital fund" to help generate and procure advanced information technologies to help the agency carry out its mission.

Expand Funding for Agencies to Develop Digital Government Applications

Federal funding for information technology has grown every year since 1996, but the rate of growth has slowed, while the amount going to new applications has declined. In FY96, federal funding for information technology grew almost 8 percent, while in FY2000, it grew less than 2 percent, increasing slightly more than 4 percent in the President's 2001 budget.¹⁰ Moreover, this growth has not kept pace with growth in private sector information technology expenditures which have averaged over 8 percent growth per year through 1999.¹¹ In addition, much of the increase in funding for IT has gone to maintaining existing systems (increasing 24 percent between FY99 and FY01), while funding for modernizing and developing new systems has actually decreased 2 percent.¹²

Box A: Ten Digital Government Applications

There are literally hundreds, if not thousands, of applications that could be developed to allow businesses, citizens, and other governments to interact with the federal government digitally. Here are 10 examples of things that could be done today.

1. Businesses and individuals could file tax returns directly with the IRS at no cost.
2. Exporters could fill out just one electronic form that is automatically routed to all government agencies involved in export issues.
3. Individuals could bid on government surplus items online.
4. Companies could file environmental compliance forms online.
5. Individuals could apply for Social Security benefits online.
6. Businesses could query a computerized "expert system" to find out what regulatory requirements their particular facility faces.
7. Individuals could store and access their medical information on a "smart card."
8. Individuals could search for federal employees through a centralized and integrated online database.
9. Government officials could purchase goods using electronic catalogs.

10. Companies could access and bid for government procurements on the Internet.

CONCLUSION

The U.S. economy is going digital. This information technology revolution provides the opportunity for the federal government to transform itself and the way it provides services to citizens. Doing so would not only cut the cost and improve the quality of government, it would improve the trust citizens have in their government. Yet, real progress in a timely manner depends upon digital government rapidly becoming a priority of Congress and the Administration, both in terms of funding and leadership.

Endnotes

1. This paper is an excerpt from the March, 2000 PPI report of the same name, which can be read on www.ppionline.org.

2. President William Jefferson Clinton, "Memorandum for Heads of Departments and Agencies: Electronic Commerce" (December 17, 1999).