

High Payoff in Electronic Government

*Measuring the Return on
E-Government
Investments*

May 2003

Intergovernmental Advisory Board
Federation of Government Information Processing Councils

In cooperation with the

GSA Office of Intergovernmental Solutions
GSA Office of Citizen Services and Communications
U.S. General Services Administration
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The Intergovernmental Advisory Board (IAB) undertook this study to identify prime examples of “high-payoff” electronic government (E-Gov) programs, to share the secrets of their successes, and to determine how they measure the results achieved from investments made.

Defining High-Payoff E-Gov Programs

As a new and powerful concept, E-Gov promises many benefits to its government sponsors. It can reduce costs of government operations; open new sources of revenue; attract businesses, tourists and new residents to the area; make it easy for citizens to do business with the government; and reinforce the relationship between the citizen and democratic government. As with any government program, the value of E-Gov is in the benefits it delivers to the public and the new avenues it opens to create value. But E-Gov can be costly, and its value to the public that supports it must be shown.

We found E-Gov programs offer many types of benefits to a government. They can be distilled into five categories. Any successful E-Gov program should address at least one of these areas, but the most successful will probably deliver benefits in multiple ways.

1. Financial: Reduced costs of government operations/enhanced revenue collection
2. Economic development
3. Reduced redundancy: Consolidating and integrating government systems
4. Fostering democratic principles
5. Improved service to citizens and other constituencies.

Financial: Reduced Costs of Government Operations/Enhanced Revenue

Collections. The low-hanging fruit of electronic government are the programs that automate routine government processes and eliminate paperwork, printing and mailing costs, check processing, document storage and retrieval, and the need for personnel to interact with citizens in person or on the telephone. This type of savings is available to every jurisdiction that implements an E-Gov program. E-Gov eliminates the need for staff intervention in online programs that provide government forms, and those that permit citizens to obtain and renew licenses and registrations, apply for government grants and benefits, and get information over the Internet.

E-Gov programs make it easier for the public to pay permits, licenses and registration fees, fines, and taxes owed to the government. These programs eliminate the need for check processing, time delays in handling checks, receipts and other paperwork. Many jurisdictions employ contractors to create and maintain the E-Gov programs used to process these payments—some of which incur no cost to the government. The use of these programs is increasing over time, although there are some indications that citizens will resist making payments online if the “convenience fee” assessed to pay for online processing is more than a nominal \$1 or \$2.

Economic Development. E-Gov programs designed to promote economic development are a boon to businesses, both small and large, thereby increasing their contribution to the local economy. One of the earliest and most popular types of E-Gov program reduces the amount of regulatory paperwork required for doing business in a community by permitting online document searches and filings, tax and wage reporting, employee background checks, workers' compensation claims, and one-stop regulatory submissions. Other E-Gov programs foster economic development by promoting the beauty, benefits, historic and recreational attractions of the area to potential visitors, businesses and residents.

Reduced Redundancy: Consolidating and Integrating Government Systems.

E-Gov programs that integrate systems and databases and provide one-stop sources of government information enable government to operate more responsively and more efficiently. Governments that have already achieved the low-hanging fruit of automation recognize the payoff that will come with the next big step toward integration and transformation of government services. National E-Gov strategies recognize the benefits of achieving economies of scale and reducing the number of duplicative systems, stressing the benefits of implementing modular applications ("build it once, use it often") and a centralized infrastructure to reduce the national investment in IT. Other benefits of consolidating and integrating E-Gov systems include the ability to provide high quality, multi-channel, user-centric services to citizens and to ensure the security of E-Gov systems.

Fostering Democratic Principles. The free flow of information permitted by the Internet facilitates transparency and accountability in government. It also increases the accessibility of government at all levels. Developing countries, especially, value E-Gov for making government more transparent and more democratic, and for encouraging citizen education and participation.

Improved Service to Citizens and Other Constituencies. Service to citizens is the primary purpose for E-Gov programs in most countries. National and state portals make government information readily available and online services accessible. Benefits delivered by these programs are defined in terms of convenience, time savings, quality and completeness of information. In past years, the focus on delivering benefits to citizens in general or specific constituencies (e.g., vacation planners, students, seniors) has been so intense that costs were often not considered.

Measuring E-Gov Programs

Regardless of the type of benefits, the best way to measure the performance of E-Gov programs is relative to the objectives of the program itself and the public agency that sponsors it. The number of ways to measure a government program is growing daily. One or more of these programs are used in most governments including national,

state, county, municipal, and tribal governments. We reviewed a wide range of processes developed to evaluate E-Gov programs, including:

- Cost-benefit analysis, net-present-value and internal rate of return
- Return on Investment
- Customer Satisfaction
- Take-up Rates
- Benchmarking.

As the need for performance measurement and accountability has increased, many jurisdictions are performing more complex and multifaceted analyses to determine the relative value of different E-Gov programs. The United States government requires the development of convincing business cases for large E-Gov programs, and for all cross-cutting E-Gov initiatives. These business cases require extensive analysis of the costs of each alternative (including “do nothing”) for satisfying a business need weighed against the total benefits. Costs, benefits and risks of each alternative are evaluated in the context of the current situation. Potential funding sources, sponsors, partnerships, and synergies are considered. Market demand and promotions are also considered in developing a business case.

Many jurisdictions use Portfolio Analysis to assess the risk inherent in all of their E-Gov programs viewed as a whole. This kind of analysis permits the funding of a high-cost program as long as other E-Gov programs that deliver high benefits relative to their costs offset it. It is measured by quantifying the aggregate risk relative to expected returns of an entire portfolio.

Risk Management is a part of all comprehensive analyses. A risk analysis considers the impact and probability that specific factors will impede the organization’s ability to realize the benefits of an E-Gov program. These include the risks of cost overruns, of technical obsolescence, or of becoming misaligned with political priorities. They also include the risks that program managers will not leverage the technology or that the target audience will reject a program. Risks of security and privacy violations must also be assessed.

The Balanced Scorecard is a conceptual framework for translating an organization’s strategic objectives into a set of performance indicators distributed among four perspectives: financial, customer, internal business processes, and learning and growth. First proposed in a *Harvard Business Review* article in 1993, it has become a popular measurement methodology in governments. A scorecard is only appropriate for organizations with a well-defined strategy with which the performance indicators can be aligned.

These assessment methodologies have been used around the world, to a greater or lesser extent in different jurisdictions. Many E-Gov pioneers agree with the assertion made by *Public Sector CXO* magazine that “E-Government, like politics, is ‘local.’”

There is no uniform “cookie cutter” approach to determining the E-Gov program that will have the highest payoff for a jurisdiction. Accordingly, there is no single measurement method that will apply as well for one government or agency as for another.

Conclusions

Any definition of “high payoff” represents value for taxpayers, through cost savings, economic development, synergies achieved through integration of government processes, strengthened democratic processes, and service to citizens and other constituent groups. Many tools can be used to measure the performance of these programs, with different tools for different values. In each case, the strategic decision-making process should determine the appropriate metrics.

In these times of tight budgets, measuring E-Gov benefits is a growing priority in governments, although the state of the art appears to be in a fairly primitive stage. Investments in E-Government, like other government investments, traditionally have not been driven solely, or even generally, by the prospects for financial return; rather, these programs have been created to deliver better services to citizen/business/interest group constituencies. Each case requires a tailored measurement approach that considers the quality, speed and comprehensiveness of services to citizens, economic efficiencies, alignment with government’s strategic/political priorities, and the risks of changing technologies, potential cost overruns and changing needs.

To maximize the benefits from E-Gov technology and increase the use of E-Gov programs, governments must market them broadly. Not all E-Gov programs are welcomed enthusiastically, despite the benefits they promise to deliver, and gaining full acceptance for E-Gov will require marketing, information and education campaigns. Citizens must be made aware that they can interact with their government online and that it is advantageous to do so. E-Gov managers must continuously assess the citizens’ level of acceptance through preference polling, customer satisfaction surveys and online trend monitoring.

The important economic value of E-Gov will be the transformational value of re-engineering crosscutting government processes, and integrating IT investments into business processes. There are formidable organizational impediments to this significant change-management objective, however, and internal factors are more important than competition as indicators of transformational readiness.

Background

Electronic government (E-Gov) is the use of technology, particularly Web-based Internet applications, to enhance the access to and delivery of government information and services to citizens, business partners, employees, agencies, and other entities. E-Gov promises its government sponsors a powerful tool for improving processes and communicating with the rest of the world. However, the real value of an E-Gov program is in the benefits it delivers to the public, and the new avenues it opens to create value. The value of E-Gov to the public that supports it must be shown.

E-Gov projects have been seen as essential communications and operational tools for public administration. Many were initiated without consideration of return on investment. Yet, as government expands its E-Gov programs, their sponsors are being asked to make a strong business case, to demonstrate a return on this investment, as they would project results from any information technology investment. Government agencies with tight budgets and an increasingly demanding clientele are reexamining their spending priorities and inquiring whether E-Gov is delivering the payoff it has been promising and which programs deliver the highest payoff.

The purpose of the Intergovernmental Advisory Board (IAB) is to provide advice and guidance to The Federation of Government Information Processing Councils on emerging IT intergovernmental issues and challenges they present. In early 2002, the IAB recognized a need to evaluate and differentiate among E-Gov programs in terms of the outcomes they deliver. Our objective was to identify the qualities that make an E-Gov program exceptionally valuable to the government that commissions it, and how the sponsoring governments measure the “payoff” delivered. Little definitive work has been done in this area, although many jurisdictions, with some urgency, are seeking information about the best practices in measuring high-payoff in E-Gov.

Measuring the benefits being achieved by individual E-Gov investments is a growing priority in governments. We examined measurement methodologies in place and in process. We reviewed E-Gov programs at the Federal, state and local levels and in other countries, seeking appropriate case studies to illustrate the qualities of a high-payoff program. We found that the state of the art appears to be in a fairly primitive stage. This report describes our findings.

The Challenge

The first challenge in determining which programs are delivering the highest payoff is defining terms: What form should the payoff in E-Government take? How does one evaluate “payoff” in this sector of society whose mission extends well beyond the bottom-line profit and loss indicators of a commercial enterprise? Unlike commercial enterprises, government is responsible to its constituents to perform a number of

other functions, many of which, by definition, are to provide services that are not commercially viable. These are not easily measurable; defining payoff in these areas requires addressing the purpose of government and the priorities of its leaders.

The term “high payoff” evokes images of windfall gains resulting from modest investments. Given limited resources to invest, and the prospect of adding to those resources through high returns on investment, it makes sense to invest in the projects that offer the highest payoff.

Since many governments are using financial measures to evaluate performance, it would seem to be a relatively straightforward task to identify and rank-order those projects that generate benefits greater than their costs. This is especially the case in the United States, where increasing importance is placed on achieving quantitative results, but the trend is spreading to Europe. A report for the E-Government workgroup of the European Union found the U.S. government to be the frontrunner in measuring economic return. Furthermore, the report found signs that “an explicit focus on value to investors as *the* key criteria is also spreading to governments in Europe... unconditional support for E-Government is being replaced by a growing demand for projects to create value and deliver Return on Investment.”

(http://www.e.gov.dk/sitemod/upload/Root/English/Value_Creation_in_eGovernment_projects.pdf)

Even in the United States, however, the value of E-Gov programs is increasingly seen as multi-faceted. In a poll of government leaders responsible for delivering programs or program mission support, *Public Sector CXO Magazine* found that organization leaders view E-Gov primarily as a way to improve services to citizens, through enhancements in mission completion and improved customer satisfaction. Only one-fifth of these CXOs considered cost-efficiency to be the most important return on investment. (The magazine’s audience includes 14,000 Chief Executive Officers, Chief Information Officers, Chief Financial Officers and other “chief officers” and their deputies who work for Federal, state and local governments.)

(http://cxoadvisory.com/futuresite.register.com/_wsn/page16.html)

We found “payoff” defined in many non-financial ways. Public service functions can have immense value in terms of delivering services to citizens, law enforcement, public safety and health. That value may or may not be reflected in financial results. The types and quality of E-Gov infrastructure can have a major impact on a local economy and the businesses that drive it. The use of E-Gov programs to consolidate the back-room processes that support service delivery yields significant results in both efficiency and effectiveness over the long-term. It also brings about fundamental realignment of government organizations and redefines “business as usual.” The use of E-Gov can be an important tool of democratic governance, facilitating the transparent, two-way, open communication that makes government-of-the-people possible.

Governments have viewed their E-Gov programs as a public service, or a utility, providing value to citizens and establishing a presence for the city, state or country in the worldwide Internet. The international leaders, Canada, Singapore and Australia in particular, are recreating their government service programs around a Web-enabled framework that focuses on customer-service goals and systems integration. E-Gov programs of U.S. jurisdictions at all levels are also predominantly customer-oriented, but not centrally coordinated as in some other countries.

The preponderance of recent studies, articles and publications addressing the valuation of E-Gov programs suggests that government executives and legislators want to see more accountability from their investments in E-Gov, in order to demonstrate that taxpayer dollars are being well-spent. Program managers are expected to justify their E-Gov expenditures with sound business cases that address the performance expectations of each individual E-Gov project and how they help achieve the goals of the program offices that implement them.

These calls for measuring E-Gov performance reflect recent findings of inadequate justification for E-Gov expenditures that illustrate the critical need for controlling government spending on E-Gov and other information technology (IT) investments.

- The US Office of Management and Budget (OMB), designated 771 of 1,400 IT projects budgeted for FY 2004 as “at-risk,” for not demonstrating sufficient potential for success or adequate IT security. “At risk” projects will be unable to proceed unless their sponsors can present a credible business case. (<http://www.cdt.org/egov/handbook>)
- The Performance Institute, in its October 2002 report *Creating a Performance-Based Electronic Government*, summarized its survey of 3,500 Federal IT personnel, finding: “Of the \$48 billion spent on information technology in FY 2002, this survey indicates that most of those expenditures were not justified by mission-aligned performance measures. This practice represents a “high risk” business practice that could result in failed IT projects and losses to the taxpayer.” (www.performanceweb.org/research/egovernment.htm)
- In Sweden, economist Richard Murray has produced manuals for government agencies to use in performing cost-benefit analyses and regularly studies the economics of government operations. He reported similar findings in an email in October 2002: “I asked about forty agencies in central government to give me cost-benefit calculations, accounts or assessments of any kind to help me judge the profitability of IT investments. I got no complete calculation and mostly assertions that these investments are or will be very profitable.”
- The Texas State Auditor’s Office found IT management to be a major risk area for the state. The report found that 48 large projects had delivery delays averag-

ing 14 months and total cost overruns of more than \$352 million. In addition, 46 of 63 systems assessed were found to be vulnerable to disruptions, data tampering, fraud and inappropriate disclosure. Only 27% had adequate system protection. (www.dir.state.tx.us/TIC/dir_info/dirpubs.htm)

The Texas auditors' findings are particularly notable when compared to the results of a 2000 Brown University study, *Assessing E-Government: The Internet, Democracy, and Service Delivery by State and Federal Governments*, which found that Texas ranked highest of all states in terms of the quality of citizen access to information and services. (www.brown.edu/Departments/Taubman_Center/polreports/egovtreport00.html)

These findings suggest there is a significant performance gap in E-Government. Public investments in IT, including E-Government, are failing to deliver commensurate payoff. Not only are they disconnected from the mission-critical programs they promise to improve; these systems, across the board, are failing to achieve their own operational goals. Governments at all levels are reconsidering their E-Gov strategies and seeking ways to reduce the costs while increasing the effectiveness of this fundamental arm of the public infrastructure.

This report examines five ways in which governments gain high payoff from their E-Gov programs, and the methods they use to determine whether they are achieving the results they want.

Defining and Measuring High-Payoff E-Gov Programs

As a new and powerful concept, E-Gov promises many benefits. It can reduce costs of government operations; open new sources of revenue; attract businesses, tourists and new residents to an area; make it easy for citizens to do business with the government; and reinforce the relationship between the citizen and democratic government. As with any government program, the real value of E-Gov is in the benefits it delivers to the public and the new avenues it opens to create value. But it can be costly, and the value of E-Gov to the public that supports it must be shown.

We undertook this report to find and describe E-Gov programs that clearly deliver high payoff to the governments that fund them. It was not an easy task, not because there are no E-Gov programs in place that generate significant cost savings, but because there are many ways to describe the benefits of E-Gov programs, each of which is valuable. We distilled these into five categories:

1. Financial: reduced costs of government operations/enhanced revenue collection
2. Economic development
3. Reduced redundancy: consolidating and integrating government systems
4. Fostering democratic principles
5. Improved service to citizens and other constituencies.

Any E-Gov program will address at least one of these categories. The most successful will provide benefits in multiple areas. The nature of the benefits determines which metrics are in alignment with the performance objectives of the program itself and those of the public agency that sponsors it.

Most jurisdictions—national, state, local and tribal—use a combination of metrics, including financial measures, customer-satisfaction, and risk assessment. Investment decisions may be based largely on political or legislative priorities, or these priorities may be assigned weights and considered along with other factors. Increasingly, jurisdictions at all levels are using a mix of measurement methods that evaluate mission-related indicators as well as cost-savings.

Single-factor measurements are rarely definitive. Most jurisdictions recognize that, in E-Gov decision-making, it can be as self-defeating to fund only those E-Gov projects that show financial savings, regardless of the service they provide, as to fund only those projects that promote citizen participation, regardless of their cost.

We reviewed a number of metrics used to evaluate E-Gov programs, including:

- Financial measures, such as return-on-investment, cost-benefit analysis, including net-present-value and internal-rate-of-return
- Indicators of public approval and acceptance, such as customer satisfaction measures and E-Gov take-up, or adoption, rates
- Benchmarking
- Balanced scorecard measures
- Business cases
- Portfolio analysis and risk management.

These measures range from the very precise measurement of cash flows to the comprehensive view of all the possible factors that might have an impact on the success of a government's E-Gov portfolio. While the process of taking measurements may not itself define what is high-payoff in E-Gov programs, government planners who use multi-factor analysis can build a comprehensive case for using E-Gov to achieve their program objectives.

This report contains a discussion of highly regarded E-Gov programs in each of these five categories. Case studies and relevant reports are cited and examples provided of methods used to measure the effectiveness of these programs. More information about the programs cited can be found at the links provided in the text.

1. Financial: Reduced Costs of Government Operations/Enhanced Revenue Collection

Many governments, particularly in the United States, define “payoff” in economic terms—e.g., revenue collected or costs reduced or avoided. They evaluate their programs in terms of the economic return on investment. States, with severely limited budgets, are the most tightly constrained. Many E-Gov managers are under pressure to assess the value of their programs and their return on investment. Some perform traditional cost/benefit analyses, and many employ elaborate formulas and ranking systems to evaluate the effectiveness of their E-Gov programs. Some are still setting up data collection systems that would enable them to perform these analyses.

a. Reduced Costs of Government Operations

The process improvements and streamlining achieved by E-Gov can provide significant savings or cost avoidance. By eliminating paperwork processing, jurisdictions across-the-board are reducing staffing requirements, paperwork, printing and mailing costs, cycle time, check processing, document storage, telephone calls and visits to field offices—efficiencies that can translate directly into overhead cost savings. These are the low-hanging fruit of electronic government, and they are becoming as commonplace as voicemail.

E-Gov programs that offer these kinds of cost reductions include many of those nominated for the National Association of State Chief Information Officers' (NASCIO) Recognition Awards for Outstanding Achievement in the Field of Information Technology (www.nascio.org/awards/2002awards/ and www.nascio.org/awards/2001awards/). For example:

- MyFlorida.com search engine reduces the number of calls to the state's call center for a savings of \$1.5 million a year.
- The Massachusetts Educator Licensure and Recruitment Initiative streamlined the state licensing process to save \$1.6 million a year.

- The Idaho Paperless Online Personnel/Payroll System saves \$430,000 a year through a 20% reduction in personnel, and saves another \$75,000 a year in costs of printing pay stubs.
- The \$7.3 million overhead cost savings and up to \$4 million in forms processing savings, combined, are just a small percentage of the \$120 million annual savings the Ohio Bureau of Workers' Compensation achieved by automating its workers' compensation claims process.
- The Wisconsin Workers' Compensation Insurers' Web Reports system achieves an estimated \$1.5 million by eliminating a half million pieces of paper each year—100,000 forms and 300,000 state mailings—as well as 20,000 annual hours of staff time.

Some of the most effective E-Gov programs are those that enable government procurement activities online. They are complex systems that facilitate government purchasing and eliminate the costs of purchase orders, reduce the need for printed catalogs and reduce calls to customer service representatives. Some examples are:

- The State of California's award-winning CAL-Buy Online Procurement System, for instance, projects \$9.7 million a year in cost savings, or \$37 per purchase order. CAL-Buy won the NASCIO Recognition Award for Digital Government in 2001. (www.nascio.org/awards/2001awards/digital_gov.cfm)
- The eMaryland Marketplace has eliminated \$100 in costs per purchase order.
- The prime example of an online acquisition program is the Federal government's GSA *Advantage!*[™], which offers 2.4 million products and services to Federal buyers over the Web, eliminating the cost of thousands of purchase orders every year. (www.gsaadvantage.gov). The success of GSA *Advantage!* enabled the GSA Federal Supply Service to close six of its eight distribution centers and forward supply points in 2001.
- Italy's Consip e-procurement project delivers to the Italian Government an annual average saving of 30% on the price of goods and services purchased through the site. Savings of 20% on administrative costs were estimated to total 1,500 billion lire (about \$700 million) for 2001. (www.consip.it)

E-Gov also offers operational, and, ultimately, economic benefits more indirectly by improving the processes of government. These include benefits from maintaining accurate data (without re-keying or checking for errors) and savings on cash-management costs by reducing the cycle time of check processing and time-to-market for service improvements. Other sources of savings include those used by the North Carolina Security Portal, which saved \$2.2 million by avoiding 550 computer incidents costing an estimated \$4,000 apiece, and by the State of Kansas, which saves nearly \$9 million a year in unemployment compensation it doesn't have to pay to people who find a job quickly through online listings. (www.nascio.org/awards/2002awards)

States use E-Gov programs for issuing and renewing licenses and registrations, in particular, hunting, fishing and boat licenses, professional licenses (e.g. for nurses, CPAs, educators, engineers, land surveyors, barbers and audiologists), business

licenses and motor vehicle/motor carrier credentials. They find administrative cost savings in offering online licenses and permits for a wide variety of activities, such as cross-country skiing in Minnesota, viewing wildlife in Alaska, and moving native plants in Arizona. States that implemented E-Gov programs for grants management streamlined their processes, eliminated paperwork, reduced application processing time and saw their staff costs reduced by as much as 35%. (See Appendix I)

b. Enhanced Revenue Collection

We found several E-Gov systems in place that either bring in revenue to their sponsors, through convenience fees that cover the costs of conducting transactions online, cash management savings derived from prompt payment of fines, fees and taxes, vendor fees that pay for the cost of online government procurement programs, such as those in Virginia and North Carolina.

Of particular interest are E-Gov programs that are developed, managed and maintained by vendors, who recover their costs by assessing fees for the services they provide. Some of these programs deliver significant cost savings to governments. Kansas has created a public/private network, the Information Network of Kansas (INK), which operates the self-funded Consolidated IT Management Model and manages 215,000 pages for the state. The network builds service applications and web sites for state agencies and associations at no cost to the agencies. The state portal encompasses all state agencies, regents and many association web sites and services. More than 90% are free to users; the other 10% collect small transaction fees and the \$75 up-front fees and \$60 annual subscription fees for access to the Kansas *Administration Regulations* and other documents provided by INK. The INK model costs the state nothing. Nine years after its creation, Ink's revenues total more than \$7 million a year. Of that, 80%, or \$5.6 million, is returned to state agencies. (<http://www.accesskansas.org>)

ServiceArizona, which was developed, hosted and maintained by IBM, allows citizens to register their vehicles, at no cost to the state. IBM recovers its costs by charging a fee for each registration. Since processing an online request costs about \$4 less than a counter transaction, the state also saves more than a million dollars a year, with over 15% of renewals being processed by ServiceArizona (www.servicearizona.com). However, there are some indications that the demand for online government is very price sensitive and that use of online transaction processing systems goes down if a "convenience fee" of more than \$1 or \$2 is charged for conducting the transaction over the Internet.

The U.K. Private Funding Initiative (PFI) places the burden of challenging inefficiency in E-Gov programs on private sector investors in public/private E-Gov partnerships that use private investment to fund public projects. Between 1997 and 2002, \$28 billion was made available through PFI in the U.K. PFI promoters cite advantages in allowing

the private sector to assume the financial risk for public projects: it requires the government only pay for the achievement of specific outcomes, forces the costing of risk, and leaves it to the private partner to challenge and correct inefficiencies in building or maintaining the programs. While this process was used primarily to finance large construction projects, with only a 25% total success rate, successful IT PFI projects include the Ministry of Defence's voice and data network across the U.K.

Some jurisdictions have explored the possibilities of funding E-Gov programs by selling government data for commercial use, although there is significant opposition to the practice. Recognizing these objections, ServiceArizona runs a disclaimer saying it does not collect or share data on Web site users.

Measuring cost-saving E-Gov projects. E-Gov projects that promise operational efficiencies are perhaps the most straightforward prospects for measuring "payoff." Economic measures range from simple cost-benefit analysis to more complex return-on-investment systems. Here are some examples.

Cost-benefit analysis. If the costs and benefits are clearly identifiable, this is a simple way to measure the economic benefits of a program. For example, the District of Columbia determined that its Business Resource Center saves District taxpayers \$1.8 million a year, net of operating costs, by eliminating some customer service positions. The Center cost \$1 million to design and build. The cost-benefit ratio is \$1million/\$1.8 million = .56. Ratios less than 1 indicate a positive return, and should be funded.

Some of the benefits of proposed E-Gov programs are difficult to substantiate; and cost estimates are not always reliable. These analyses are generally prepared by the sponsor of a proposed E-Gov program without an independent review, and can often lead to inaccurate conclusions. Jurisdictions such as the State of Iowa require independent third-party reviews of proposals for IT investments above a certain cost level.

Return on Investment (ROI). Many states calculate return on investment to measure economic, as well as intangible benefits. Some of these are universally difficult to measure—an individual's productivity, for instance, or the impact of training programs. Others, such as the value provided to citizen constituencies, are inherent to the government process itself. The State of Iowa's highly regarded Return on Investment program, is the most robust ROI measurement system used by the states. It was recognized by NASCIO as the best state IT management initiative in 2002.

(https://www.nascio.org/awards/2002awards/state_management.cfm)

The Iowa ROI program is a process that has been incorporated into the State's overall IT management program. All IT programs costing \$100,000 or more must be reviewed by the State's Information Technology Council, which assigns values to

different features of each system under consideration and determines which programs should be funded each year. The system attempts to balance the output-related attributes of the project with other important drivers, such as legislative mandates. (See Appendix II.) This complex return-on-investment program must be rigorously enforced, and as such, requires continuous management attention. The numerous analyses required also may require more resources to perform than are available during a period of tight budgets.

Return-on-investment calculations are required for all proposed IT project plans in Kansas. The ROI metrics are custom tailored for each project. ROI is filed with the Kansas Information Technology Office as part of a cost benefit statement, to demonstrate benefits realized during, and one year after, project completion. In its first year, the Kansas Consolidated Management Model delivered a 13.7% return on investment for 23 major projects worth \$75 million.

Other tools used for measuring Return on Investment are Net Present Value (NPV) and Internal Rate of Return (IRR) measures. See Appendix II for descriptions.

2. Economic Development

Economic development programs traditionally have focused on attracting businesses that would build large plants and bring jobs to the community, perhaps in exchange for tax breaks. This is not the focus of economic development on the Web. Instead, the emphasis is twofold: on helping small businesses—the fastest growing economic sector worldwide, and a favorite constituency for state E-Gov programs—and on promoting the geographic area to attract tourists and residents.

Complying with laws and regulations cost small firms nearly half a trillion dollars in 2000, or \$7,000 per employee in firms with fewer than 20 employees, according to the U.S. Small Business Administration. Small businesses struggle to comply with regulations that govern fundamental activities as paying taxes, hiring and managing employees and obtaining the necessary licenses and permits.

One of the 24 U.S. Federal E-Gov initiatives, Business Compliance One-stop, which uses www.businesslaw.gov as its platform, helps businesses by creating a one-stop where they can easily access information about laws and regulations and learn how to comply. The site initially will focus on four legal and regulatory areas (environment, workplace health and safety, employment, and taxes). By providing quick access to information about laws and regulations, compliance assistance tools, and the ability to perform online transactions, Business Compliance One-Stop will offer improved customer service to the business community. Estimates indicate that businesses will save at least \$275 million annually by searching for information in an organized, user-friendly manner in one portal. (<http://www.whitehouse.gov/omb/egov/gtob/compliance.htm>)

Many of the most successful state E-Gov programs also target small businesses with programs that save money by permitting online document searches and filings, tax and wage reporting, employee background checks, renewal of professional fees and licenses, and by reducing time, transactions and office visits. Some of these applications also save money for the sponsoring jurisdictions, as well as for local businesses.

Making information and services (e.g., reservations, permits, scheduling) available online helps bring tourists and businesses and their spending money into a region. Every state and national government has a home page; many local governments do as well. Most governments have established a central portal that consolidates their Web presence and provides access to their programs and information. Portals are excellent promotional tools. They can present the city, county, state or country in a very attractive light for outsiders, and make it easy for tourists, visitors and residents to make plans and reservations in the area. Portals can make basic citizen services and business transactions available at a click, so a citizen can check the school lunch menus, register his boat, pay a traffic fine, and apply for unemployment insurance, all online. Portals can be very helpful to citizens and businesses, but they also can save a lot of taxpayer money. Mass.gov, the State of Massachusetts portal, for example, is expected to return \$250 million over five years on an investment of \$180 million.

(www.nascio.org/awards/2001awards/digital_gov.cfm)

Singapore. As with traditional economic development programs, the government bears the initial costs for the benefit of business. For example, the Singapore government uses E-Gov as a testbed to allow the commercial sector to develop products and experience, such as the “radio frequency I.D.” (RFID), which helps increase productivity in many functions. The RFID uses a tag composed of a memory chip and a copper antenna that stores a unique identifier and a small amount of programmable information without battery power and transmits information to a handheld reader when scanned. The process is used in Singapore to automate the entire book loan and return process for better library management and for more efficient ATM maintenance. The country uses this kind of investments in IT to grow industry, and makes its “information banks” available to benefit industry.

Finland. Finland launched a “portal for companies” in Spring 2002. A joint effort of seven agencies working in the field of business development, it offers information on venture capital, research and development, exports and regulations. (<http://www.ica-it.org/conf36/docs/Finland.pdf>)

Measuring the payoff from economic development E-Gov programs. While E-Gov programs designed to foster economic development may deliver direct financial returns to the government sponsors, the direct results are generally more beneficial to industry. The Texas System for Electronic Rate and Form-Filing, for instance, offers the insurance industry up to \$12 million a year in process savings. The Colorado Secretary of State Business Center offers businesses annual savings totaling \$2 million, about 6 times the savings projected for the government. (www.nascio.org/awards)

This is illustrated by the results of a nationwide *E-Government Benefits Study* conducted by the Australian National Office for the Information Economy in 2001-2002. The study measured the benefits-to-cost ratio for 24 government online programs that together represented an investment of approximately \$109 million. The overall benefits-to-cost ratio of 92% reflected a negative return on investment. However, of the three types of programs reviewed, only the programs directed to business pulled down the results. They scored a 54% benefits-to-cost ratio compared to 121% for citizen online programs and 128% for internally focused government online programs. (http://www.noie.gov.au/publications/NOIE/egovt_benefits/Egov_benefits.pdf)

Like the other crosscutting Federal E-Gov initiatives, Business Compliance One-stop has specific performance targets to meet, and is required to report progress regularly to OMB. The purpose of the Business Compliance project is to reduce the burden on businesses by making it easy to find, understand and comply with relevant laws and regulations at all levels of government. (<http://businesslaw.gov/index.cfm>) Its metrics include the following:

- Time savings for business compliance and filing
- Regulatory agency savings through transition to compliance from enforcement through automated processes
- Number of days reduced for issuing permits and licenses
- Cycle time to issue permits and licenses
- Number of visitors/page views
- Reduction in redundant IT investments.

3. Reduced Redundancy: Consolidating and Integrating Government Systems

The national governments with the most advanced E-Gov programs are turning their attention to the need to integrate E-Gov programs across agencies at all levels of government. High up-front costs may make integrating programs appear uneconomical, and organizational barriers to change present a daunting challenge.

E-Gov programs that integrate systems and databases and provide one-stop sources of government information enable government to operate more responsively and more efficiently. Governments that already have achieved the low hanging fruit of automation recognize the payoff that will come with the next big step toward integration and transformation of government services.

National E-Gov strategies recognize the benefits of achieving economies of scale and reducing the number of duplicative systems, stressing the benefits of implementing modular applications (“build it once, use it often”) and a centralized infrastructure to reduce the national investment in IT. Other benefits of consolidating and integrating E-Gov systems include the ability to provide high quality, multi-channel, user-centric services to citizens and to ensure the security of E-Gov systems.

Governments are looking to integrate horizontally, *i.e.*, consolidating IT infrastructure to link similar systems across agencies; vertically, *i.e.*, consolidating within a line of business at different levels of government; and consolidating around customers. The objective is to make government more efficient and more effective. Opportunities abound for consolidating like programs, eliminating redundant systems and replacing multiple licensing agreements with enterprise software licenses.

Finland. Finland's Ministry of Finance has launched a project in which 48 agencies work together on E-Gov service strategies. This approach has been successful in the field of information security, and other efforts are underway for joint projects to handle paperless accounting. (<http://www.infosoc.fi/PublicServices.pdf>)

Finland's consolidation efforts are also being extended to the local level. They provide a public-tenders database that targets Calls for Tender below a threshold level, particularly in the municipal sector. Finland's government-owned public procurement company, Hansel, also operates a complete system for electronic tendering and procurement that was rated the most advanced in Europe by the European Union Commission. (<http://www.posti.fi/english/uutiset/31-12-102-14-01-35.html>)

United States. The major finding of the U.S. E-Government Task Force in 2001 was significant overlap and redundancy in the Executive Branch, with multiple agencies performing each of approximately 35 major functions of government. The Task Force's *E-Government Strategy* calls for simplifying government by leveraging technology to create new and more effective ways of achieving government's objectives. Integration of processes, particularly cross-agency and across governments, enables the simplification of government processes and achievement of significant benefits over the long-term. (<http://www.whitehouse.gov/omb/inforeg/egovstrategy.pdf>)

A year and a half later, OMB is investing a significant effort to develop a comprehensive Federal Enterprise Architecture and find opportunities to achieve synergy through consolidation. (<http://feapmo.gov/>) Directed centrally by OMB, this effort is being replicated by Federal agencies, as well as some states and municipalities. The formulation or implementation of an agency architecture was named as the primary challenge of Federal Chief Information Officers in 2002 in a survey conducted for the Washington-based Association for Federal Information Resources Management (AFFIRM). By contrast, the category, "Using IT to Improve Service to Customers/Stakeholders/Citizens," the number-one challenge in 2001, dropped to 9th place in the 2002 survey. (<http://www.affirm.org>)

United Kingdom. In its *UK Online Annual Report 2002*, the British Government commits to "a radical reform of public services," citing E-Government as "a powerful catalyst to bringing about this transformation." The keystone of this transformation will be the installation of a common infrastructure across Government. ([www.e-envoy.gov.uk/oeo/oeo.nsf/sections/reports-annrep-2002-pdf/\\$file/annualreport02.pdf](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/reports-annrep-2002-pdf/$file/annualreport02.pdf))

The U.K. is building a central infrastructure designed to host multiple Government Web sites, known as Delivering on the Promise (DotP). With the Government Gateway, it will lead the way in delivering a central common infrastructure, bringing economies of scale benefits to Government departments through a modular 'build-once, use-many' architecture. The U.K. expects to realize benefits from this program as it achieves a critical mass, by leveraging opportunities for content syndication and cross-site content sharing making the service available to local authorities and agencies.

Measuring the payoff from reducing redundancy. The payoff from consolidating and integrating systems is in implementing an enterprise (or whole-of-government) approach to E-Government. Benefits come from eliminating unnecessary backroom systems, creating an enterprise-wide infrastructure, re-engineering business processes to achieve synergies and order-of-magnitude improvements, and from providing simplified and unified access for users. While the benefits accrue over the long-term, the costs, which tend to be up-front, can be high. These include the costs of developing and implementing enterprise architecture, acquiring new systems to replace redundant systems, and redesigning business processes, as well as the significant costs of retraining personnel to work with redesigned processes.

Return on Investment. Because of the broad impact of these multi-agency programs, a measurable return on investment should be expected over time. Consolidation across organizational lines requires extensive change management efforts and long-term investments. Breaking down silos can require sustained effort over time, and the dedication of considerable political capital. And, since economic savings come some time after implementation and E-Gov programs require up-front investment, there is often no funding to initiate these programs.

The State of Iowa realized savings of \$2.4 million in 2001 and \$1.06 million in 2002 as the result of combining similar or duplicative systems that were revealed by the required Return on Investment analysis.

(https://www.nascio.org/awards/2002awards/state_management.cfm)

The Washington State Combined Application Program (WASHCAP), an award-winning Federal demonstration project, brought together the Social Security Administration, the U.S. Department of Agriculture's food stamps program, and the Washington State Department of Health and Social Services to consolidate benefits programs that serve needy citizens in the state. By automating the process and centralizing caseload maintenance in WASHCAP, the program simplified the process for benefits recipients and dramatic savings for taxpayers. Annual savings in administrative and outreach costs amount to approximately \$6.37 million per year. This represents a total return of \$31.5 million, over the span of the five-year demonstration project, on a \$400,000 investment.

(https://www.nascio.org/awards/2002awards/dg_g_to_g.cfm)

Virginia's state government spent \$10 million to develop a base mapping program, a single consistent spatial data infrastructure for Virginia based on high-resolution digital orthophotography for the State's entire land base. The program can significantly reduce the overall cost of producing a digital base map for Virginia's counties and communities by providing statewide coverage at half the cost that counties and cities pay to produce the products individually. The potential Return on Investment is over \$10 million. But it will not be realized unless the 100+ cities and counties participate in the program and, as a result, reduce their own costs. (www.nascio.org/scoring/viles/2002Virginia5.doc)

Citizen/Customer Satisfaction. Building on the understanding it has developed over years of experience with E-Gov programs, the Government of Canada has adopted a broad service vision that focuses on client-centric service delivery. This vision requires a number of government wide strategies to ensure responsive, cost-effective, accessible, trusted and secure service delivery, and demands a much higher degree of coordination and integration across government. The government is committed to changing the governance structure of its Government Online and Service Improvement initiatives to achieve this vision. Accordingly, it has developed a performance measurement framework that encompasses three main outcomes—citizen/client-centered government; better more responsive service and capacity for online delivery. Specific indicators have been developed for these measures and work is underway to develop performance measures for them. These indicators are as follows: (<http://www.iccs-isac.org/eng/cmt-about.htm>)

Citizen/client centered government	• <i>Convenience</i> • <i>Accessibility</i> • <i>Credibility</i>
Better, more responsive service	• <i>Critical mass of services</i> • <i>Take-up</i> • <i>Service transformation</i> • <i>Citizen/client satisfaction</i>
Capacity for online delivery	• <i>Security</i> • <i>Privacy</i> • <i>Efficiency</i> • <i>Innovation</i>

Business Cases. Comprehensive business cases encourage E-Gov program directors to consider and plan for all the ways the program will achieve its desired outcomes. Projects in different stages will require different levels of maturity, but the basic elements of a business case should be incorporated in project planning. These elements include cost, schedule, and customer analysis, plan performance metrics, project management and analysis of risk and alternatives. Customers and

other stakeholders should independently validate assumptions used in the analysis. It is essential that the business case go beyond simply project-oriented financial justification. The business case must address broader issues, e.g., political, legislative, value to external and internal audiences, and enterprise-wide impact, like some of the States' return-on-investment tools.

The U.S. Office of Management and Budget is seeking an order of magnitude improvement in government performance by closing performance gaps and leveraging e-business techniques. In its budget process, OMB requires agencies and crosscutting E-Gov projects to use business cases to assure that IT investments generate increased efficiency, effectiveness and maximized service. (<http://www.whitehouse.gov/omb/circulars/a11/2002/part7.pdf>) Several key criteria are applied to determine the viability of a business case:

- Linkage to the agency mission, strategic goals and program performance
- Support of the President's Management Agenda by incorporating multiple agencies or governments, by using e-business techniques, and by aligning with the Federal Enterprise Architecture and the other E-Gov initiatives.
- Mitigation of risk to the Federal government
- Compliance with IT security requirements.

OMB scores business cases with a 1-to-5 rating in 10 categories. The strongest documented business cases score between 41 and 50 points overall. Business cases scoring between 31 and 40 points still need strengthening. Those that score 30 points or below require much more work. The criteria and scoring are shown in Appendix IV.

OMB requires agencies to map their major IT investments to the Federal Enterprise Architecture's Business Reference Model. Functions that are performed by multiple agencies are now clearly delineated and the opportunities for cross-agency collaboration to improve performance are readily apparent. (www.feapmo.gov)

Balanced Scorecard. The Balanced Scorecard set of performance indicators was originally developed to measure private industry non-financial performance. It has often been modified for use in government agencies by accounting for mission and mandate requirements that are essential to public sector entities. Balanced Scorecard measures are distributed among four perspectives: financial, customer, internal business processes, and learning and growth. Some indicators are maintained to measure an organization's progress toward achieving its vision; other indicators are maintained to measure the long-term drivers of success. Through the balanced scorecard, an organization monitors both its current performance (finance, customer satisfaction, and business process results) and its efforts to improve processes, motivate and educate employees, and enhance information systems—its ability to learn and improve.

Risk Assessment. Risk associated with an E-Gov investment may impact performance, impede implementation or drive up costs. Risk that is not identified cannot be mitigated and can cause a project to fail. The more thought is given up-front to mitigating the risks of a project, the more likely it is to succeed. Risk assessments are used increasingly as part of the business cases made to support E-Gov investment proposals. OMB requires agencies to demonstrate an acquisition strategy that uses a strong risk mitigation plan to limit the risk to the government. Formal risk assessments are a major feature in the IT business case process developed for the U.S. Postal Service and for the value measuring model developed for the U.S. Social Security Administration and the U.S. General Services Administration. The USPS model quantifies four categories of risk: business risk, technology risk, schedule risk, and financial risk. The SSA/GSA Value Measuring Model considers risk as one of three categories for analysis, along with cost and a category that represents five “value” determinants. In New Zealand, risk-based funding rules for complex projects have been developed. Using quantitative risk analysis, each risk is assessed along with its impact and probability. Thus, the fiscal impact of a project’s risks can be made explicit to decision-makers.

4. Fostering Democratic Principles

The Internet offers many opportunities for citizens to interact directly with their governments on civic issues, opportunities that may significantly change the functioning of democracy. It exemplifies many of the qualities that underlie a democratic society, such as the free flow of information, interactive communication and feedback, community development and transparency. For E-Gov programs that provide these qualities, the high-payoff may come in the quality of civic decision-making that results from increased participation by citizens.

E-democracy involves not only strengthening existing democracy but also developing new forms of democracy. We are witnessing the advent not only of a new society and a new economy but also of a new democracy. We must realize that our old values and standards can be preserved only if our democracy is sufficiently flexible to adapt to the changes taking place around us.

– Dr. Pauline Poland
Advisor, The Netherlands Ministry of the Interior and Kingdom Relations
February 8, 2002

Some countries are actively reaching out to citizens to encourage the broadest participation in the democratic process. The Netherlands, in particular, has undertaken many experiments with public consultation and service delivery in recent years. The Ministry of the Interior and Kingdom Relations, has published a *Handbook for Electronic Consultation of Citizens*, provides substantial financial incentives for government bodies to post information encouraging the involvement of citizens in the democratic

process, and links to all political Web sites through the government portal. In 2001, the handbook was revised to outline various technical instruments that can be used to consult citizens on the web, with the aim of lowering the threshold for citizen-involvement as much as possible.

In developing countries, in particular, transparency is the characteristic most valued in E-Gov programs. E-Gov promotes transparency in government operations by making information freely available, making transactions highly visible online and deterring corruption. Over 58% of the participants from 35 countries who were surveyed at the 2002 State Department E-Gov Conference identified “transparency and democracy” as the goal of primary importance for E-Gov programs in their countries, over “supporting local industry,” “social and human capital development,” “foreign direct investment” and “export promotion.”

(http://www.mcconnellinternational.com/ereadiness/The_Global_E-Government_Outlook.pdf)

E-Mexico was launched to bridge the digital divide by fostering the creation of a national technology infrastructure and transitioning Mexican society into the information age through programs for E-Government, e-health, e-education and e-economy. It is an initiative of the President's Office for Innovation in Government, whose objectives are to produce a world-class federal government around six major objectives:

- Culture of quality in public service
- Savings and cost reduction
- Deregulation and administrative simplification
- Use of information and communication technologies
- Cultural change and professional development of public service
- Transparency and fighting corruption.

Transparency is central to the Mexican president's agenda. It is at the heart of the government's E-Gov outreach program, which is attempting to bring entire communities online—both geographic communities and communities of interest through a network of Internet community centers and electronic forums with dozens of topics and thousands of participants. The primary goal of the system's developers is to expand the reach of the E-Government program by encouraging citizens to participate through local programs, through communities of interest, or through individual Internet use. (<http://www.ica-it.org/conf36/docs/Mexico.pdf>)

The Bhoomi project in Karnataka State in India is exemplary in the way it delivered for its citizens by making government more transparent. Bhoomi is a computerized system of land records that replaced an exploitative manual system. About 6.7 million farmers in Karnataka State own 20 million land holdings. The documents recording these land holdings are required for land transactions, for obtaining loans and for other concessions. Under the manual system, these records were maintained by village accountants, without public scrutiny but with many reported instances of records

manipulation, bribery, and harassment. With all records now maintained in the public domain, farmers have ready access to the documents they need and information in the public record. They can access these records easily through a network of kiosks installed in 177 locations, where queues are routinely seen. Despite some concern about higher fees to use the kiosks—15 rupees vs. 2 rupees for the manual system—some 330,000 people have paid the fee.

(http://www1.worldbank.org/publicsector/egov/bhoomi_cs.htm)

Voting Online. Although the use of online voting in Brazil's landmark presidential 2002 presidential election was watched with interest around the world, there is considerable resistance to voting over the Internet. A 1999 IBM survey of elected officials in 14 European countries found that 74.2% believe information technology can enhance democracy, but only 50.4% supported the introduction of online voting alongside traditional methods. In the United States, a large majority (63%) of the American public opposes the idea of allowing people to vote online for federal offices such as the presidency or Congress, according to a February 2002 report of the Council for Excellence in Government. Not only did 51% strongly oppose online voting, but support for it dropped from 38% to 33% during the previous year.

(<http://www.excelgov.org/displayContent.asp?Keyword=ppp022602>)

The implicit promise that online voting will increase the percentage of citizens who exercise their franchise ensures that jurisdictions will continue to experiment with this process. The U.S. Defense Department, which administers the Federal Voting Assistance Program for American citizens in the military or overseas, piloted an Internet-based absentee voting project in the November 2000 general election. This was the first time binding votes were cast over the Internet for Federal, state and local offices, including President and members of Congress. The States of South Carolina, Florida, Texas, and Utah and counties within those states also participated. The study concluded that further development is needed before Internet voting can be provided effectively, reliably and securely on a large scale. The integrity of the online electoral process has not yet been established and the potential for election fraud when using the Internet is still a major concern. (<http://www.calvoter.org/votingtech/VOIReport7-9.pdf>)

The first binding U.S. public-sector election online was the 2000 Democratic Party primary in Arizona. Al Gore beat Bill Bradley 4-to-1 in this primary, in which twice as many voters participated as in previous primaries. The system encountered some technical problems, such as overloaded telephone lines, and older browsers that crashed, but the major obstacle to online voting—in the short term—may be lawsuits challenging online voting for unfairly favoring the class of voters that has easy access to the Internet. (<http://usinfo.state.gov/topical/rights/democracy/inetvot110701.pdf>)

E-Rulemaking, one of the U.S. Federal E-Gov initiatives, is a one-stop Federal regulatory clearinghouse that makes it easy for citizens to participate in Federal rulemaking and the democratic process by improving access to, and quality of, the rulemaking

process. When citizens submit comments on regulations, Federal agencies must take their views into account and justify their regulatory actions. Descriptions and the full text of every proposed and final Federal regulation currently open for comment can be read online on www.regulations.gov, and readers may submit comments to the Federal agencies responsible for the rulemaking action. Launched in January 2003, this initiative already has taken major steps:

- All agency regulatory docket sites are linked to FirstGov.gov
- A “Clinger-Cohen” letter was issued by OMB to consolidate redundant and siloed Web sites
- Planning has begun to consolidate existing agency e-docket systems at the Department of Transportation, the Food and Drug Administration, and the Department of Labor with the Environmental Protection Agency’s system.
- Business process reengineering of the rulemaking process has been initiated.

The quality of government service delivery can and should contribute to strengthen democratic citizenship and the bonds of trust between citizens and their democratic governments.

Measuring E-democracy programs. Most typical E-Gov metrics are not applicable to this high-payoff category. E-Gov programs designed to meet civic objectives are generally cost centers. Rather than reducing the costs of government, these programs represent a commitment to provide good government without the expectation of a return on investment. Over the long run, the returns may be high in terms of the civic and economic health of a community, but the immediate financial impact is likely to be costly.

Governments around the world are actively promoting citizen feedback online in order to strengthen democracy and development, according to a report by the Government Online International Network. (<http://governments-online.org/documents/e-consultation.pdf>) However, few countries have developed programs to measure e-consultation projects. Those that have, have done so mainly on a pilot basis.

During the Organisation for Economic Co-operation and Development (OECD) meetings on “e-consultation” or democratic processes online, participants discussed a framework for information, consultation and public participation in policy-making, and criteria for evaluating (1) the impact of government efforts to inform, consult and engage citizens in policy-making; and (2) the process used. ([http://www.oilis.oecd.org/olis/2002doc.nsf/43bb6130e5e86e5fc12569fa005d004c/10fb657f44a588d4c1256bec004df3a6/\\$FILE/JT00130234.PDF](http://www.oilis.oecd.org/olis/2002doc.nsf/43bb6130e5e86e5fc12569fa005d004c/10fb657f44a588d4c1256bec004df3a6/$FILE/JT00130234.PDF))

For example, the effectiveness of on-line voter registration could be indicated by the percentage of eligible voters registered; the effectiveness of online voting by an increase in the percentage of voters.

5. Improved Service to Citizens and Other Constituencies

The primary goal of E-Gov programs at all levels and in all countries is to make it easy for citizens to obtain service and information and to interact with the government. This is the first stated goal in the U.S. *E-Government Strategy* and it reflects a national perception. Two thirds (68%) of Americans polled by the Council for Excellence in Government in a 2000 survey said it should be a priority for government to invest tax dollars in making more information and services available over the Internet. The return on those investments will increase as citizens find they can obtain the government information and services they need online.

....for the public services, the real opportunity is to use information technology to help create fundamental improvement in the efficiency, convenience and quality of our services. That is why we aim to have all government services on-line by 2005, building on best practices... But we recognise that British businesses and citizens are not yet using government services online in the numbers that match the best in the world. So our new strategy will focus on driving up access in key categories in the NHS, education, transport, benefits, tax and criminal justice. It will include, for example, services to enable drivers to conduct all their dealings with Governments online including tax discs, vehicle registration and driving licence applications.

– U.K. Prime Minister Tony Blair in his keynote speech to e-Summit
November 19, 2002
(<http://www.number10.gov.uk/output/Page1734.asp>)

The results of a University of Texas study suggest another reason governments would find it useful to increase citizen use of E-Government programs: funding. The *Cost-Benefit Study of Online Services* in January 2003 revealed that 55% of the Texans surveyed believe E-Gov should be considered a “value-added service whose costs should be shouldered by its users” and that using tax dollars to support E-Gov was unacceptable. Sponsors of E-Gov programs must be vigilant to ensure that they are “delighting” the public with the convenience and ease-of-use of online government, or they run the risk of losing their funding. (www.dir.state.tx.us/TIC/dir_info/dirpubs.htm)

Use of E-Gov is slowly increasing. In 2002, the average use of government online services had increased by 4% to 30%, according to a Government Online survey of 28,000 people in 31 countries. The survey showed that 42% of the population had personally used the Internet in the previous month. The use of E-Gov ranged from 3% in Hungary to 57% in Sweden. Major gains since 2001 were in Australia (up 15% to 46%), Turkey (up 10% to 13%), and the United States (up 9% to 43%). Only Japan showed a drop in E-Gov usage, from 17% to 13%; Internet use in Japan dropped overall. (www.tnsfres.com/gostudy2002)

The survey reported that 2002 take-up rates, i.e., the percentage of Internet users that use E-Gov, ranged from 16% in Hungary to 82% in the Faroe Islands. The high-percent-

age users included Norway and Denmark (81%), Finland (78%), Estonia (77%), Australia (73%), Canada (70%), France and Hong Kong (69%) and Singapore (68%). The United States take-up rate was 62%. The U.K. was near the low at 30%.

Australia. The National Office for the Information Economy, reports that there is ongoing demand for E-Gov services and users believe significant benefits are available.

The survey, taken in 2001-2002 found the take-up of E-Gov services among businesses ranged from 54% for small businesses (fewer than 4 employees) to 86% for businesses with more than 100 employees. (http://www.noie.gov.au/publications/NOIE/egovt_benefits/Egov_benefits.pdf)

Canada. Sixty four percent of all Internet users visited Government of Canada Web sites, up from 52% in 2001. Although only 22% report the Internet/e-mail as their main method of contact with governments, 40% expect it to be their primary communication channel in two years and 48% expect it to be so in 5 years.

United States. Internet usage in the United States is estimated at 71% by the University of California at Los Angeles (UCLA); 63% of the population used the Internet in the previous month, Taylor Nelson Sofres reported. More than a third of these U.S. Internet users visited a federal government Web site in February 2003, according to Nielsen//NetRatings. Traffic to those sites increased 26% from December 2002 to February 2003. The Treasury Department experienced the largest growth during this period: 147%; traffic to NASA sites grew 124%; the Education and State Departments also grew by 90% or more. (Nielsen//NetRatings, 3/17/03, <http://www.nielsen-netratings.com/news.jsp>)

United Kingdom. The U.K., which is in the process of spending £6 billion on IT improvements, is focusing on improvements to its very low take-up rates—only 13% of the population (30 of Internet users) used government online programs last year, despite the fact that close to 75% of all government services were available online. To boost usage, the U.K. has undertaken a multifaceted approach to making computers easy to use by the entire population. Some of the initiatives outlined by Prime Minister Blair in his address to the November 2002 e-Summit include:

- Putting all government services online by 2005, following a strategy that will focus on driving up access in key categories in health, education, transport, benefits, tax and criminal justice.
- Encouraging competition in the broadband market to keep the price of broadband low and falling.
- Providing funding to deliver broadband connections to every primary and secondary school in the country by 2006.
- Investing more than £1 billion in broadband connectivity for public services, including criminal justice, hospitals and doctors' offices.
- Providing incentives for businesses and individuals to invest in information and

communications technology, to build skills at every level and for businesses to increase their proportion of R&D spending.

- Ensuring access to the Internet for everyone who wants it by 2005, starting with the establishment of 6,000 online centers throughout the country to provide a crucial entry point for those unable to afford PCs and connections.
- Gaining trust in the way data will be used, ensuring that systems are secure, and addressing ways public services can authenticate each other and their customers.

Canada. The success of Canada's E-Government program can be measured by its designation, for two years in a row, as the leader among 23 nations for online service delivery. The Accenture report *E-Government leadership—Realizing the Vision*, April 2002, found that "Canada has achieved its leadership position largely due to its focus on the citizen in its E-Government programs." (www.accenture.com)

Canada's Government-on-Line initiative has resulted in higher levels of satisfaction and "surprisingly resilient positive perceptions of government service." The public's overall rating of the quality of the service or information they receive from their federal government has risen steadily every year from 59% saying 'good' in 1999 to 67% in 2002. One valuable benefit of the improvements in E-Gov services offered to Canadians is the finding that 67% of Internet users surveyed said they would be comfortable submitting their personal information over the Internet to the government.

Michelle d'Auray, CIO for the Government of Canada, has an even more ambitious vision for E-Gov—and for government itself:

Technology is driving us to rethink how we are organized in government to serve individuals and business, in Canada and abroad, and how we can be more effective and innovative in achieving the public interest faster and more efficiently. The big payoff will come when we've moved from "E-Government" to create a de facto "my government" for every citizen and business. This means looking beyond service, so that Canadians can participate more actively and systematically in the development of policies that affect their daily lives and the future of the country.

Australia. Ann Steward, of the Australian National Office for the Information Economy (NOIE), views E-Gov's most important benefit as "enabling government to transform itself through technology into a citizen-centric, high quality integrated services delivery agent." NOIE surveyed citizens and businesses in 2001/2002 and found that 86% of E-Gov users felt the overall benefit of E-Gov was either significant or moderate. However, only 45% were able to quantify actual cost savings associated with interacting online compared to traditional channels; only a third of those estimated savings of more than \$25 per interaction.

The NOIE survey found that interacting with government online offered some to significant improvements in the following areas:

- Ease of finding information (80%)
- Service quality (75%)
- Ability to make decisions (75%)
- Access to public records (68%).

Over 80% of businesses and nearly 90% of government employees saw either some or significant improvements in the quality of their decision-making.

(http://www.noie.gov.au/publications/NOIE/egovt_benefits/Egov_benefits.pdf)

The most successful E-Gov programs are tailored to the citizens they serve, particularly E-Gov programs managed by the more “hands-on” providers of services in State and local governments. “Cookie-cutter” approaches are not useful.

The biggest benefit E-Government offers government is a way to tailor their service delivery mechanism to meet the needs of their customers. E-Government makes it possible to deliver transactions and information through multiple channels, i.e. Web Sites/Portals, Interactive Voice Response, Kiosks, PDA's, and text messaging, when and where it is convenient for the customer.

– David Molchany, Chief Information Officer, Fairfax County, VA.

Measuring improved service to citizens. Most of the E-Gov programs we reviewed—on the state, federal and international levels—are primarily directed at providing better service to various constituencies, such as taxpayers, small businesses, lobbyists, nurses, hunters, job-seekers, or insurance claims filers. It is easy to see their effectiveness, in terms of improving transactions between citizens and government. It is often more difficult to measure their value in terms of a return on investment.

Some jurisdictions assess the value of their customer service E-Gov efforts with numerical scores to quantify how much they help achieve the organization's objectives. Others attempt to quantify the savings to individuals, in terms of waiting time, or travel expenses. Recognizing that the function of electronic government is to serve citizens better, however, many programs find E-Gov programs strengthen their own effectiveness by offering citizens another—usually better—channel for interacting with their government. These programs are low-risk, since they only augment, and do not replace, the existing systems that permit a citizen to get the same service by mail or in person.

There are many ways to measure the effectiveness of the service provided to constituent groups by E-Gov programs. According to the Performance Institute, many Federal agencies use accessibility metrics to measure improved program performance. These include measuring customer satisfaction, the percent of audience reached,

response time, reduced constituent cost, returning users, and service availability. The first two of these measures are widely considered effective measures of the effectiveness of E-Gov programs.

Customer satisfaction surveys. Customer satisfaction measures are becoming more common and more standardized. In the United States, the American Customer Satisfaction Index (ACSI), a private application developed in partnership with the University of Michigan School of Business and the American Society for Quality, tracks annual trends in customer satisfaction with Federal government agencies. The quantitative ACSI survey instrument, which is available for use in Federal agencies through a U.S. Treasury franchise, is regularly employed to measure customer satisfaction with government services. In its 2002 survey, for the first time, the ACSI survey covered several government Web sites, whose average score (73.5) is higher than the overall ACSI score for private industry (73.1), news and information sites (73) and government offline (70.2).

Canada has developed a Common Measurement Tool (CMT) for use in measuring client satisfaction. The CMT provides public organizations with a set of standard questions and standard measurement scales for use in surveying their clients. It is a comprehensive collection of potential survey questions that an organization may select from, to custom design a client satisfaction survey that meets their information requirements. The use of standard questions allows the organization to benchmark progress over time and, since questions are standard, organizations can compare results with other organizations within the same business line. To ensure this ability to benchmark performance, several core questions are required for inclusion in all surveys. Designed to provide client feedback to any public organization and ensure that all aspects of client service are considered, the CMT is conceived around five key elements: client expectations, perceptions of the service experience, satisfaction levels, levels of importance, and priorities for service improvements. (www.iccs-isac.org/eng/cmt-about.htm)

Benchmarking. The U.K. expanded its exercise benchmarking the G7 countries (US, U.K., France, Germany, Italy, Japan, and Canada), Sweden and Australia, to measure key E-Government indicators within its benchmarking framework. The benchmarking report, issued at the e-Summit in November 2002, places the U.K. ahead of the other European countries and Japan, and in second place overall behind the United States. The report highlighted areas in which the U.K. can learn from other countries—Canada's online services and Sweden's expansion of PC use, among others. ([http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/esummit-benchmarking/\\$file/indexpage.htm](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/esummit-benchmarking/$file/indexpage.htm))

Improving Take-up Rates. There is no “payoff” from an E-Gov program that is not used and there is no guarantee that “if you build it, they will come.” The effectiveness of an E-Gov program is in direct proportion to the audience it

reaches, and the savings it provides. State and local officials have found that E-Gov programs must be tailored to provide what their communities need, using the methods they prefer.

One way to increase the effectiveness of E-Gov is to increase its use by the intended audience. By monitoring usage and repeatedly polling citizens and other stakeholders, program managers can learn what steps to take to improve service delivery and outreach to citizens and so increase usage.

A recently published State of Texas Cost-Benefit Study of Online Services found that 11 applications and services offered by TexasOnline could save personnel costs of between \$35,207 and \$1.9 million if they achieved 30% take up. These prospective savings would rise proportionately—to as much as \$6.3 million—as the take-up rate neared 100%.

The United States government recognizes the need to market its online programs and is planning a major marketing campaign to promote FirstGov.gov, the national Web portal, and to inform citizens what is available online from the government. The U.S. General Services Administration's Office of Citizen Services and Communications will launch this campaign in the summer of 2003. The immediate goal is to help FirstGov.gov become a "household name" by raising awareness of the national E-Gov resources among all market segments, and encouraging citizens to routinely use this single gateway to get information from all levels of government quickly, easily and conveniently. (www.firstgov.gov)

"After all, the potential of E-Governance is actualized only when it has reached to each and every individual and community in its specific conditions and in a manner that is sustainable," an E-Gov official from India commented during the State Department's E-Gov Conference in November 2002. (http://www.mcconnellinternational.com/ereadiness/The_Global_E-Government_Outlook.pdf)

Conclusions

Any definition of “high payoff” represents value for taxpayers, through cost savings, economic development, synergies achieved through integration of government processes, strengthened democratic processes, and service to citizens and other constituent groups. Many tools can be used to measure the performance of these programs, with different tools for different values. In each case, the strategic decision-making process should determine the appropriate measurement.

Each case requires a tailored measurement approach that considers the quality, speed and comprehensiveness of services to citizens, economic efficiencies, alignment with government’s strategic/political priorities, and the risks of changing technologies, potential cost overruns and changing needs.

To maximize the benefits from E-Gov technology and increase the use of E-Gov programs, governments must market them broadly. Not all E-Gov programs are welcomed enthusiastically, despite the benefits they promise to deliver, and gaining full acceptance for E-Gov will require marketing, information and education campaigns. Citizens must be made aware that they can interact with their government online and that it is advantageous to do so. E-Gov managers must continuously assess the citizens’ level of acceptance through preference polling, customer satisfaction surveys and online trend monitoring.

The important economic value of E-Gov will be the transformational value of re-engineering crosscutting government processes, and integrating IT investments into business processes. There are formidable organizational impediments to this significant change-management objective, however. In the United States, the Office of Management and Budget has taken on the challenge of transforming government through E-Gov. As stated in the U.S. *E-Government Strategy*, February 27, 2002 (www.whitehouse.gov/omb/infoereg/egovstrategy.pdf):

...[T]he pay-off will not result from automating current processes, but rather through the transformation of how the government interacts with its citizens and customers. Only through changing how we do business internally—that is, streamlining work processes to take advantage of modern IT systems—will citizens experience the transformation envisioned.

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We reviewed a number of studies issued on performance measurement in government. We examined several measurement systems created to calculate return on investment in E-Gov programs, at the national, Federal and State levels. We compared and categorized best-in-class State E-Gov programs that were nominated by their States for IT Recognition Awards submitted to NASCIO in 2001 and 2002.

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Payoff Categories and Benefits Offered by 75 Nominees for 2001 and 2002 IT Recognition Awards National Association of State Chief Information Officers

A. Summary of 22 NASCIO 2001 Recognition Award Nominees

2001 Project	5 Payoff Categories	Benefits
California CAL-Buy Online Procurement System	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	- Efficiency in purchasing - Easier for vendors to do business with State - Ultimately \$9.7 million annual process savings @\$37 per purchase order.
Connecticut Ethics Commission Online Reporting System	Constituent Services: Delivery of services and info to the users	- FOIA requests dropped from 500 to 50/mo. - \$10,000 savings in printing, etc., costs in 2000 - Reduced staff-time, paperwork (cost \$200,000)
Idaho Official Web Site accessidaho.org	Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	- 3 million hits to home page - Increased ability to transact e- business - future savings of many thousands of dollars (cost to state = 0)
Illinois E-Filing	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	- \$149,500 first year savings - better customer service - more efficient operations - more resources left over to promote voluntary compliance (cost = \$34,000)
accessIndiana – Next Generation Portal	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating systems redundant systems	- \$3 million/year in development, support, maintenance and marketing saved based on public-private partnership - fewer telephone inquiries - better accuracy
State of Iowa Resource Network – Community Resource Directory	Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	- Consolidates info systems and alleviates overhead costs
Kansas State Board of Nursing Online License Renewal	Constituent Services: Delivery of services and info to the users	- reduced phone calls by +90% in 5 years - streamlined processes - self funding with user fees

Maine Rapid Renewal Service	Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant	- time savings - improved customer service - transaction fees for private partner
eMaryland Marketplace	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users	- Reduces the cost of purchase orders by \$100. - Reduces "maverick" buying - Increases state purchasing power
Massachusetts Enterprise Portal – Mass.gov	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users	Improved: - convenience - customer service - efficiency - productivity \$250 million total estimate (cost \$180 m over 5 years)
Missouri iGrants: Internet Grant Management Application	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	Not seen as a revenue generator - improves productivity - improves availability of service - allows reallocation of resources to other projects
Nevada On Line Corporate Name Reservation	Constituent Services: Delivery of services and info to the users Economic Development: Encouraging growth in regional economic activity	- 10-15% increase in corporate filings with increased fees of \$57,000 in year 1. (cost = \$500) - improved accuracy, turnaround time and better info. - attracts business to the state/
New Jersey Portal: Virtual Gateway to Government Services	Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	- 2.7 million hits per day - bring seamless E-Government services to NJ citizens - reusable "build it once" components such as PKI, e-payment, shopping cart
New York State Government Without Walls Initiative	Constituent Services: Delivery of services and info to the users Reduced Redundancy: Eliminating and integrating redundant systems	- Government services are easier and more convenient to access - eliminating duplication will save state money - almost 600 transactions and services available online
North Carolina's Portal: NC@YourService	Constituent Services: Delivery of services and info to the users Economic Development: Encouraging growth in regional economic activity Reduced Redundancy: Eliminating and integrating redundant systems	- self-funded e-procurement model
Ohio Dolphin Project Workers comp	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the users	- \$122 million annual savings from process improvements and claims cost reductions (cost = \$15 million)

**Pennsylvania PA
Open for Business**

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the users
Economic Development: Encouraging growth in regional econ activity
Reduced Redundancy: Eliminating and integrating redundant systems

- "friction-free government"
- eliminate redundant systems through de-fragmenting

**Texas System
for Electronic Rate and
Form-Filing (SERFF)**

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the users

- Costs to states have been "all but eliminated"
- Industry benefits \$150k to \$12 m per year for SERFF filings

Virginia eVA

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the users

- Funded through a self-financing model
- \$1 billion annual business volume (start-up cost = \$300k)

Transact Washington

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the users
Reduced Redundancy: Eliminating and integrating redundant systems

- Long-term savings from consolidated infrastructure and eliminating duplication
- Reduced operating costs from more efficient processes
- convenience for businesses and citizens

**West Virginia
Service at the
Speed of Technology**

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the users

- reduced staff by 2.5 positions
- \$4,000 savings
- shared infrastructure

Wisconsin.Gov

Constituent Services: Delivery of services and info to the users

- more convenient ways to access state and local government services

B. Review of 53 NASCIO 2002 Recognition Award Nominees

2002 Project	5 Payoff Categories	Benefits
Colorado Integrated Criminal Justice Information System	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- Reduced mailing costs - Improved accuracy of info - Improved timeliness - Reduced data entry redundancy - Reduced paper processing and interagency contacts
MyFlorida.com	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	\$2.2 million a year: - Improved access to online services reduces operating cost \$700,000 a year - Improved search engine reduces call center calls by 1%, for \$1.5 million savings
Idaho Attorney General's No-Call List Website and Purchase and Registration Applications	Constituent Services: Delivery of services and info to the public	- Saves printing/ mailing costs of \$thousands - initial \$420k receipts covers \$180k costs plus 2 years' expenses
Indiana Department of Revenue I-File	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- \$51,000 a year and increasing annually
Kansas Job Link	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- Individuals using job function need .75 weeks' less of unemployment benefits, which saves \$9 million per year - Time required to process a claim reduced 76%
Kentucky IVR Deer Harvest Program	Constituent Services: Delivery of services and info to the public	- \$48,000 per year over 5 years - Savings of 119 days for data collection
Massachusetts Educator Licensure and Recruitment Initiative WINNER	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- Streamlined licensing cuts 6 months off process - cuts \$1.6 million annual costs - adds \$2.5 million licensing revenue (cost: \$2.6 million)
Missouri Internet On-line Claims Filing System	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- potential savings of \$61,250 per year - redirected 6600 staff hours toward customer service
Montana Criminal Offenders Network – Online Services	Constituent Services: Delivery of services and info to the public	- Crime victims' peace of mind - \$54,550 maintenance paid by other state agencies

Nevada Employment Insurance Internet Claim System	Constituent Services: Delivery of services and info to the public	- System availability 24/7 - Data Integrity - System Security
New York City Restaurant Inspection, Recording and Reporting System	Constituent Services: Delivery of services and info to the public	Improved sanitation in city restaurants due to availability of information about health code violations
North Carolina's Portal to Automated Unemployment Insurance Services	Constituent Services: Delivery of services and info to the public	The portal improved process for filing unemployment claims online and to pay weekly claims by direct deposit.
Ohio Department of Natural Resources	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	Automating fishing/hunting licenses supports marketing program to attract/retain loyal customers; \$500k in (incremental?) licensing revenue
Pennsylvania Department of Environmental Protection's eNOTICE Service	Constituent Services: Delivery of services and info to the public Fostering Democracy: Nurturing civic practices that support democratic ideals	Empowers people by sending them customized notifications of environmental permitting actions so that they can comment on pending actions. Costs = \$20,000.
Rhode Island Online Boat Registration Renewal Service	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- \$40k (\$0 cost) - Less State employee time needed for data entry, answering calls, processing checks, marketing.
South Dakota Service Direct (Forms Portal)	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- Savings in staff time, postage, storage, check processing. - Customer convenience of online forms and pre-populated forms.
Texas State of Texas Assistance and Referral System	Constituent Services: Delivery of services and info to the public	Saves time and trouble in predetermining whether individuals are eligible for government benefits
Utah Community Services Directory	Constituent Services: Delivery of services and info to the public	- Up to date information available to citizens - Information consolidated and easy to access - Database can be leveraged by other state agencies
Virginia VEC Claim for Benefits	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- \$6.5 million savings for claimants in saved travel and time; - \$821,786 operational savings (cost = \$250,000)

Florida Juvenile Information Justice System	Financial: Cost savings or cash input Reduced Redundancy: Eliminating and integrating redundant systems	- Eliminates the cost of connecting 443 police departments and sheriffs' offices of \$2.1 million/year. (cost of coding = \$211,200)
Idaho Paperless Online Personnel/Payroll System	Financial: Cost savings or cash input	- \$430,000 annual savings in personnel - 20% reduction in personnel - \$75,000 annual savings in printing pay stubs (cost = \$1.65 million)
Illinois Wireless Information Network (I-WIN/ALERTS)	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- Enhancement of interagency communication
Indiana State Student Assistance Commission Suite of Services	Constituent Services: Delivery of services and info to the public	- 35% reduction in personnel costs in the Grants Division - \$390,000 received in sale to another state
Missouri E-Grants	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- 86% reduction in application processing time using 35% less staff - 360% increase in technical support to school districts (cost = \$2.5 m)
Nevada Multi-County Integrated Justice Information System	Reduced Redundancy: Eliminating and integrating redundant systems	- seamless info and services at all levels of government - reduced paper flow - reduced errors
New Jersey Pre-Inmate Management System	Reduced Redundancy: Eliminating and integrating redundant systems	- reduced backup of State inmates in county jails which costs up to \$4.7 m. - streamlined processes and reduced redundancies
New Mexico Web-based Instructional Materials System	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- Savings from revised processes \$236,440/year (costs \$167,551)
North Carolina Security Portal	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- Savings from avoiding 550 computer incidents @ \$4k = \$2.2 million (cost = \$160k)
Pennsylvania Justice Network	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- reduced costs - reduced delays - public safety - easy to replicate in other states and federal agencies (cost = \$18 million)

Texas ARP/ATP Online System	Constituent Services: Delivery of services and info to the public	\$21,338 per grant net savings (includes cost savings at colleges)
Virginia Base Mapping Program	Reduced Redundancy: Eliminating and integrating redundant systems	\$10 million avoided costs for counties and cities if paid for individually
Washington State Combined Application Program	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	Total net savings, including outreach and admin = \$6.37 m per year (cost = \$400k)
WINNER		
West Virginia Data Integration for Effective Reporting and Efficient Fiscal Management	Reduced Redundancy: Eliminating and integrating redundant systems	- data accuracy - personnel time savings
Colorado Secretary of State Business Center	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	Annual savings: - \$2 million (\$169.5/ month) for businesses on UCC filings and documents - \$372,000 State savings on UCC filings, certificates (\$31k/month)
District of Columbia Business Resource Center	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	\$1.8 million a year savings from reduced customer service positions. (cost- \$1 million)
WINNER		
Florida Business and Professional Regulation Single Licensing Project	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- annual admin cost savings of \$40,000 per FTE from customer contact center consolidation; reduced data entry; and other personal services
Idaho Small Business Solutions	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- \$7,000 per year - fosters 15-30 new businesses - adds 15-90 jobs (cost = \$120k)
Illinois E-Batch License Renewal	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	- reduced paperwork backlog - user-friendly and timely services to professionals (cost = \$12,500)
Indiana Uniform Commercial Code Services: Filings and Searches	Constituent Services: Delivery of services and info to the public	- time savings with 24/7 access - \$30,000 salary unnecessary - accuracy

Iowa Single Contact Repository	Constituent Services: Delivery of services and info to the public	Total -\$264k/year: - savings to employers doing background checks @\$100 = \$132,000/year - savings to state government = \$132,000/year (cost = \$277,000)
Kansas Online UCC Filing System	Constituent Services: Delivery of services and info to the public Reduced Redundancy: Eliminating and integrating redundant systems	Savings for Sec of State Office @\$.71 per filing = \$710,000/year Other benefits are in time saved, convenience, reduced payment processing and greater accuracy.
Kentucky The Extranet: Business Friendly Control	Financial: Cost savings or cash input Economic Development: Encouraging growth in regional economic activity	- timely and cost-efficient info updates for travelers to Kentucky - \$4.9 million/year state tax revenue from website visitors (cost = \$138,333/year)
Massachusetts Webfile for Employers	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	- reduces costs of mailing and forms printing, data entry and data processing - reduces reporting burden on employers
Montana Business Entity Search – Online Service	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	Public/private alliance that developed and maintained program saved taxpayers \$60k in 3 months.
Nebraska's UIConnect	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	\$424,164 in Yr 1: - \$361,624 for employers in tax calculation, report preparation, bookkeeper time - \$62,540 for government in data entry, wage reporting, payment processing
North Carolina International Registration Plan	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	By allowing online renewals, registrations and fee payments, offers savings in: - agency time - admin burden - motor carrier operating time and costs
Ohio Business Gateway	Financial: Cost savings or cash input Constituent Services: Delivery of services and info to the public	Reduction of: - time, data redundancy, errors in complying with tax laws - data entry - paperwork
Pennsylvania Open for Business Interactive Registration Portal	Constituent Services: Delivery of services and info to the public	- Reduced lag time in business registrations - Average \$500 professional services charge per business - Available for use by other states

Texas Electronic Reporting System for Reporting and Payment of Oil and Gas Royalties

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the public

- Savings of \$300,000 a year
- Reduction of FTEs from 27-20
- Mail processing, data entry, error correction, time and rework reduced by >70%.

Utah Impound Vehicle System

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the public

- Reduced cost of:
- data entry staff
 - decertifying tow companies
 - locating vehicles
- Citizens get real-time info on their vehicles

Virginia WebCat: A Virginia DMV Extranet Application for Motor Carriers

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the public

- Service 24/7
- Transactions at half the cost of manual
- reduced paperwork and in-person visits
- reduced time requirements

Washington Online Uniform Commercial Code Filings and Searches

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the public

- Annual savings:
- \$323k salaries
 - \$154k data processing
 - \$36k microfilm processing (cost=\$1.05m)

Wisconsin Worker's Compensation Insurers' Internet Reporting System

Financial: Cost savings or cash input
Constituent Services: Delivery of services and info to the public

- Annual cost savings of \$1.5 million @ \$10 for each piece of paper saved by all parties (costs = \$275k startup + \$25k/yr)

Summary of E-Gov Measurement Systems

1. **The Anexys Primer on Measuring ROI in E-Government, by Anexys LLC, Indiana University School of Public and Environmental Affairs, and META-Group (August 2001)**

- Early adopters of new valuation methods will test models that move beyond the traditional ROI measurements. By 2004-2005, such efforts will drive widespread adoption of comprehensive valuation models in large jurisdictions.
- In today's legislative climate, it's likely that government agencies will be increasingly required to conduct ongoing ROI studies. Agencies that fail to measure ROI of E-Government initiatives may face difficulties in receiving both initial and ongoing funding.
- ROI Valuation is critical to E-Government success because the cost of failure is too high, because E-Government initiatives:
 - come with substantial expense
 - can have very long durations
 - are infrequent occurrences
 - and have limited irreversibility.
- While most E-Government initiatives are established to reflect the policy direction of the agency, such as citizen convenience, economic development, tourism or creation of an educated work force, the most common themes are:
 - Increasing the competitive advantage of the agency over other agencies within the same jurisdiction
 - Creating greater citizen satisfaction
 - Economic development or reduction of transaction costs by providing online services.
- Carol Kelly of META-Group suggests jurisdictions should:
 - Determine components based on public policy makers' articulated agenda, e.g., decentralization, flexibility and personalization
 - Develop explicit analysis criteria for each scorecard component (balanced scorecard method)
 - Determine measurement points for data collection
 - Map known existing relations/approval processes
 - Develop methods to quantify intangible benefits
 - Ensure that overall valuation model measures stated policy requirements
- Anexys suggests four possible valuation methods:
 1. Net present Value to measure dollar return on projects
 2. Benefit Cost Analysis to calculate project costs relative to benefits (tangible and intangible) affecting diverse groups.
 3. Cost Effectiveness Analysis to quantify tangible and intangible benefits for specific, standardized populations.
 4. Portfolio Analysis to quantify aggregate risk relative to expected returns of an entire portfolio of initiatives.

ROI Valuation Methodologies for E-Government
 From The Anexys Primer on Measuring ROI in E-Government, 2001
 By Anexys, LLC Indiana University-Bloomington
 Institute for Development Studies META Group, Inc.

Method	Net Present Value	Benefit Cost Analysis	Cost Effectiveness Analysis	Portfolio Analysis
What it does	Measures dollar return on projects	Calculates project costs relative to benefits (tangible and intangible) affecting diverse groups	Quantifies tangible and intangible benefits for specific standardized populations	Quantifies aggregate risk relative to expected returns of an entire portfolio of initiatives.
Formula	Present Value of Net Cash Flow – Net Investment	Net Total Benefit/Net Total Cost	Total Cost/Total-Output	Return of Investment/Risk of Investment
When to use	When cash flows are private and benefits tangible	When cash flows are social and benefits are both tangible and intangible	When cash flows are private and benefits are both tangible and intangible	When valuating an agency's total risk. Cash flows can be social or private and benefits can be tangible or intangible but must be consistent across the portfolio.
Basic decision rule	For independent projects with NPV greater than \$0, the project should be accepted	If ratio is >1, there is a positive ROI and the project should be accepted. If ratio is <1, there is a negative return.	If ratio is >1, there is a positive ROI and the project should be accepted. If ratio is <1, there is a negative return.	If ratio is >1, it means there is more return relative to risk and the portfolio is within tolerable risk levels. If the ratio is <1, it means risk is higher relative to return and the portfolio exceeds tolerable risk.
Advantages	Straightforward	Flexible. Allows additional intangible benefits to be included.	Useful at analyzing incremental benefits, in terms of achieving specific goals, in relation to marginal costs.	Good for risk-adverse decision-makers who may not want to attempt multiple high-stakes, high-risk projects simultaneously.
Disadvantages	Limited to internal capital investments. Does not allow for intangible benefits.	Can be expensive, time-consuming. Challenging to agree on values of intangible costs.	Technique not directly related to the outcome; measurement is limited to the cost-effectiveness, not outcomes.	Complex, but could possibly be the most accurate in terms of strategic management.

2. *Creating a Performance-Based Electronic Government*, a report issued October 30, 2002, by The Performance Institute, et al.

Key themes:

1. The administration and OMB are to be commended for their strong leadership of E-Gov initiatives, though some improvements are needed.
2. Federal agencies generally fail to use mission-aligned IT performance measures to justify, manage and evaluate the success of E-Government.
3. Agencies need to become more creative and willing to “blow up” old program structures with technology.
4. Non-governmental intermediaries are providing greater opportunities to borrow rather than build an E-Government solutions
5. E-Government is increasingly focusing on the citizen again, but not all E-Government initiatives are “citizen-centered.”
6. CIOs are assuming an appropriate role of “enabler” of agency business processes and are more integrated with the rest of the agency’s leadership.
7. More program managers are playing leadership roles in E-Government, but more needs to be done to engage all program managers in E-Government leadership roles.
8. Excellent cross-agency coordination is seen in the priority E-Government initiatives, but stove-piped systems and processes remain an obstacle to an integrated E-Government.
9. The federal enterprise architecture is recognized as the necessary, scaffolding for all agency E-Gov initiatives.
10. Establishing clear priorities is paying off in generating attention to and sufficient funding for key E-Gov initiatives.

3. *Technology in Government: Riding the Waves of Change*, Accenture Institute for Strategic Change, 2002

Accenture interviewed 70 political leaders and top government executives from a range of government agencies in 10 countries.

Public officials interviewed agreed on five broad areas that are priorities for improvement in government:

1. Differentiate services to create more constituent-centric government
2. Share assets and solutions across organizations and levels of government
3. Establish new funding mechanisms and incentives to achieve cross-departmental goals
4. Improve services by taking a consolidated view of constituents’ information
5. Foster prosperity by developing a robust national technology infrastructure.

Public officials' efforts to date in these five areas have begun to pay off in improved management practices and greater efficiency. But they have not gone far enough.

Accenture foresees 3 dramatic changes enabled by emerging technology waves that democratic governments should pursue now:

1. Establishing dynamic connections...between governments and their constituents to enable intelligent interactions....The primary characteristics include a single, integrated face for government interactions; a practical set of channel choices, two-way flows of meaningful information, convenient services that are embedded in everyday activities; and an agile network of intermediaries for service delivery.
2. Embracing policy speed to market, or radically accelerating the processes of policy formulation and implementation in order to improve outcomes.
3. Engaging constituents as integral stakeholders in the everyday activities of government. Using new processes and powerful tools, citizens and businesses will leave behind the traditional arms length relationship with governments to embark on a closer collaboration....And constituents will take responsibility for paying for the services and resources they use.

4. *Value Measuring Methodology: Capturing, Measuring and Evaluating the Value of IT Investments*, U.S. Social Security Administration/U.S. General Services Administration

VMM is a toolkit for capturing, measuring and evaluating the value of E-Government IT investments. It provides the structure, tools and techniques for a comprehensive analysis and comparison of value (benefits), cost and risk. Outcomes include:

- Measures that are used to define success, identify and analyze alternatives, address values, and support desired outcomes.
- Documentation that provides an audit trail of decision-making and assumptions regarding priorities, value, risk and cost.
- Comparison of alternatives and relationships between value and investment cost.
- Analysis that must be summarized in the preparation of budget justification documents such as OMB Exhibit 300.

VMM provides a foundation for decision-making and management of an initiative. The methodology has the approval of the CIO Council Best Practices Committee.

Benefits Cited in State E-Gov Programs Nominated for NASCIO Digital Government Awards

Workers Compensation

State	Workers' Compensation Project	Benefits
Ohio Bureau of Workers' Compensation (BWC)	The Dolphin Project (www.ohiobwc.com) provides a window into the state's workers' compensation system through 24/7 account access and electronic request and receipt of services.	Over \$120 million annual savings to BWC on a \$15 million investment. Short-term returns to BWC: - Early intervention reduces time to report a claim from 25 to 7 days; lowers claims costs by \$113.4 million a year - Demographic information updates shift costs to customers of \$500,000 a year - Processing electronic forms vs. paper saves \$800,000 to \$4 million a year - Overhead cost reductions associated with public data record requests and status inquiries total \$7.3 million a year. In addition, shorter medical bill payment cycle benefits providers.
Wisconsin Worker's Compensation Insurers' Web Reports	The Insurers' Pending Reports System is a claims management tool for insurers and claims administrators to get real-time access to the status of workers compensation claims.	\$1.5 million estimated annual savings to State, industry and workers from eliminating 500,000 pieces of paper, vs. \$275,000 start-up and \$25,000 annual operating costs. Eliminates: - almost 100,000 forms each year - 250,000-300,000 State mailings a year - 20,000 annual hours of staff time for private insurance claims adjusters and State staff.

Unemployment Compensation

State	Unemployment Insurance Project	Benefits
Kansas Job Link	The Tax, Appeals and Benefits Self-Service (TABS) System was initiated by the Kansas Department of Human Resources to improve, reengineer, redesign and restructure the entire unemployment insurance infrastructure. It allows unemployed workers the ability to file Unemployment insurance claims and link directly to job opportunities at www.kansasjoblink.com	- Processing time for unemployment claims dropped 76% from 47 minutes per claim to 11 minutes per claim. - By integrating the unemployment claims and job search applications in a single Web application, the system helps claimants become employed sooner than they would have. Therefore, they receive, on average, several days less in unemployment benefits. This saves the State trust fund nearly \$9 million a year.
Missouri Department of Labor and Industrial Relations	The Missouri On-line Internet Claims Filing System developed by the Office of Information Systems and Employment Security, permits automated unemployment claims processing and links to the State's on-line employment search engine.	- Saves over \$28,000 in toll-free telephone costs - Reduces staff hours by 6,600 - Available 24/7, not just during business hours - Allows claimants to file in privacy.
Nevada Department of Employment, Training and Rehabilitation	The Unemployment Insurance Internet Claims System is linked to the State's job search functions. It was built on a fast-track basis when it became clear that the number of unemployment claims would exceed capacity to handle them.	The State's return on investment is defined as "the seamless delivery of services at the government level around the needs of the citizen. As the usage of the site increases, therefore, increased service is provided to the citizen."

North Carolina Employment Security Commission

The North Carolina Portal to Automated Unemployment Insurance Services delivers workforce services to North Carolina's workers through real time, Internet-based unemployment insurance benefit claims and access to the State's job listings.

Savings of \$1.8 million a year on the investment of \$480,000 in federal grant funds. This includes:

- Close to an estimated \$950,000 a year in unneeded staff time to answer calls and process claims, based on:
- \$71,200/month for in-person help
- \$8,300/month for phone assistance.
- Direct deposit of unemployment checks saves over \$850,000 a year on checks, envelopes and postage.

"As current programs are improved and new ones are added, ESC expects more and more return on its investment, both in the financial sense and in its emotional investment to fulfill its mission statement by providing the best customer service possible..."

Virginia Employment Commission (VEC)

The Virginia Employment Commission Claim for Benefits system was developed to reduce traffic by initial claimants into VEC's local field offices and eliminate keying of unemployment insurance information by VEC personnel.

VEC estimates the Claim for Benefits system will save \$7.27 million over its 3 year lifetime, vs. a \$250,000 investment from a U.S. Labor Department grant:

- \$6.45 million in travel hours in driving time for claimants who filed online rather than appearing in person at a field office.
- \$822,000 in operational time savings for field office personnel who won't have to process claims filed in person.

Government-to-Business Programs

State	Business Project	Benefits
Connecticut	Ethics Commission Online Reporting System	- FOIA requests dropped by 90% to 50/month - savings in printing costs - reduced staff time and paperwork
District of Columbia	Business Resource Center	- \$1.8 million a year from eliminating customer service jobs
Illinois e-Filing	e-Filing	- \$149,500 year 1 savings - better customer service - more efficient operations
Massachusetts	Webfile for Employers	- reduces mailing, printing and data entry costs - reduces reporting burden on employers
Nebraska UIConnect	UIConnect	Savings in year one - \$361,624 for employers in tax calculation, report preparation, bookkeeper time - \$62,540 for the government in data entry, wage reporting, payment processing
Ohio Business Gateway	Business Gateway	Reduced time, data redundancy, errors, data entry, paperwork
Texas System for Electronic Rate and Form Filing (SERFF)	System for Electronic Rate and Form Filing	Savings of \$300,000 a year - reduction of 7 FTE - reduced mail processing, data entry, error correction, time and rework by 70%

Online Acquisition Systems

State	Online Acquisition System	Benefits
California	CAL-Buy Online	Process savings of \$37 per purchase order. Ultimately \$9.7 million annual process savings.
Maryland	EMaryland Marketplace	Savings of \$100 per purchase order. - Reduces "maverick" buying - Increases state purchasing power
New Mexico	Web-based Instructional Materials System	Savings from revised processes \$236,440/year. (Costs \$167,551)
North Carolina	NorthCarolina@YourService	Self-funding
Virginia	EVA	Start up costs of \$300,000 plus time of 10 managers and 4 staff. Self-financing system: AMS doesn't get paid until system is used.

Online Licensing

State	Online Licensing	Benefits
Florida	Business and Professional Regulation Single Licensing Project	Annual administrative cost savings of \$40,000 per FTE; for savings of 9 FTE, \$360,000 annual savings.
Illinois	E-Batch License Renewal	Reduced paperwork backlog User-friendly and timely services
Kansas	State Board of Nursing Online License Renewal	Reduced phone calls by >90%
Maine	Rapid Renewal Service	Time savings for citizens and state employees
Massachusetts	Educator Licensure and Recruitment Initiative	Eliminates: - 6 months processing time - \$1.6 million annual costs - Increases licensing revenue by \$2.5 million. (Cost = \$2.6 million)
North Carolina	International Registration Plan	Savings in: - agency time - administrative burden - motor carrier operating time/costs
Rhode Island	Online Boat Registration Renewal Service	- \$40,000 (cf. no cost) - Reduces employee time for data entry, answering calls, processing checks, marketing
Virginia	WebCat: A Virginia DMV Extranet Application for Motor Carriers	- Transactions at ? cost of manual reduced paperwork and in-person visits - reduced time requirements

Law Enforcement Information Systems

State	Law Enforcement Project	Benefits
Colorado	Integrated Criminal Justice Information System	- Reduced mailing costs, paper processing and interagency contacts - Improved accuracy of info - Improved timeliness
Florida	Juvenile Justice Information	- Eliminates the \$2.1 million annual cost of connecting 443 police and sheriff's offices and \$211,000 cost of coding
Illinois	Wireless Information Network (I-WIN/ALERTS)	- Enhancement of interagency communication
Montana	Criminal Offenders Network—Online Services	- Crime victims' peace of mind - \$55,000 maintenance paid by other agencies
Nevada	Multi-county Integrated Justice Information System	- Seamless information and services at all levels of government - Reduced paper flow - Fewer errors
New Jersey	Pre-Inmate Management System	- Reduced backup of State inmates in county jails which costs up to \$4.7 million - Streamlined processes and reduced redundancies
Pennsylvania	Justice Network	- Reduced costs - Reduced delays - Public safety - Easy to replicate Total cost \$18 million.

Grants Management Programs

State	Grants Management Program	Benefits
Indiana	State Student Assistance Commission	- Reduced staff costs by 35% - Sold backend system to another state for \$390,000 - Streamlined processes - Improved communications
Missouri	eGrants	- Reduced application processing time by 86% - Reduced staff by 35% - Eliminated 17 forms - Consolidated Federal grant programs
Missouri	iGrants: Internet Grant Management Application	- Reduced staff required for grant processing by 31 - Improves service availability from 18.5% of resources to 44.4% - Shortened elapsed days for application from 65 days to 5 days
Texas	ARP/ATP Online System	- Increased grant proposals processed from 2,900 to 9,000 with no extra staff. - Eliminated 6 temporary staff - Saved \$21,338 per grant cycle
West Virginia	Service at the Speed of Technology	- Reduced staff needed to disburse funds by 1.5 FTE and 1 contractor - Saved \$40,000

OMB A-11 Section 300 Scoring Criteria

Note: OMB has renamed its required "Exhibit 300" as "Capital Asset Plan and Business Case."

300.10 How will OMB evaluate the business cases in the exhibits 300?

All business cases are scored against a core set of criteria and the results are provided to the agency via the budget pass-back process. While one size scoring does not fit all categories, this scoring is meant to ensure that agency planning and management of assets is consistent with OMB policy and guidance. For projects other than IT, the IT specific categories are awarded full points as they are not applicable. The scoring of a business case is two-fold. The business case is scored based upon the criteria listed below and then a programmatic review is done for the project. A business case may be the strongest possible based upon the criteria listed here and if the program is deemed ineffective and changes are being made, then there is no need for the investment represented by the business case scoring. Business case scoring is as follows:

Business Case (BC) (composite of all categories) **Total Score for Business Case**

Projects scoring 5 and meeting program requirements are automatically recommended for funding. Projects scoring a 4 and meeting program requirements, and meeting most of the business case requirements are recommended for funding and the agency is instructed to continue improvements in the areas identified as needing work. Projects scoring 3 or below have the opportunity to improve to a 4 or degrade to a 2 rather easily. Projects scoring a 2 or below are not recommended for funding.

Score: Category/Total		Definition
5	41-50	Strong documented business case (including all sections as appropriate).
4	31-40	Very few weak points within the BC but still needs strengthening.
3	21-30	Much work remains to solidify and quantify BC. BC has the opportunity to either improve or degrade very quickly.
2	11-20	Significant gaps in the required categories of the BC.
1	1-10	Inadequate in every category of the required BC.

Supports the President's Management Agenda Items (AI) (Multiple Sections)

- 5 This is a collaborative project that includes multiple agencies, state, local, or tribal governments, uses e-business technologies and the project is governed by citizen needs. Project also supports the Federal Business Architecture published by OMB. If project is a steady state project, then an E-Gov strategy review is underway and includes all of the necessary elements. If appropriate, this project is fully aligned with one or more of the President's E-Gov initiatives.

- 4 This is a collaborative project that includes multiple agencies, state, local, or tribal governments, uses e-business technologies though work remains to solidify these relationships. Project also supports the Federal Business Architecture published by OMB though work remains to solidify the linkage. If project is a steady state project, then an E-Gov strategy review is underway but needs work in order to strengthen the analysis. If appropriate, project supports one or more of the President's E-Gov initiatives but is not yet fully aligned.
- 3 This is not a collaborative project though it could be and much work remains to strengthen the ties to the President's Management Agenda. If a steady state project and no E-Gov strategy is evident, this project will have a difficult time securing continued or new funding from OMB. If appropriate, this project supports one or more of the President's E-Gov initiatives but alignment is not demonstrated.
- 2 This is not a collaborative project and it is difficult to ascertain support for the AI. If steady state project, no E-Gov strategy was performed or is planned.
- 1 There does not seem to be any link to the AI and no E-Gov strategy.

Acquisition Strategy (AS) (Part I, Section I.G)

- 5 Strong Acquisition Strategy that mitigates risk to the Federal Government, accommodates Section 508 as needed, and contracts and statements of work (SOWs) are performance based. Implementation of the Acquisition Strategy is clearly defined.
- 4 Contracts and SOWs are performance based with very few weak points that agency is strengthening and implementation of the AS is clearly defined.
- 3 Much work remains to solidify and quantify the AS.
- 2 Some parts of the AS are present but no clear implementation strategy.
- 1 There is no evidence of an AS.

Program Management (PM) (Part I, Sections I.D and I.H)

- 5 Program is very strong and has resources in place to manage it.
- 4 Program has some weak points in the area of PM and agency is working to strengthen PM.

- 3 Much work remains in order for PM to manage the risks for this project.
- 2 There is some understanding of PM for this project but it is very rudimentary.
- 1 There is no evidence of PM.

Enterprise Architecture (EA) (Part II, Section II.A) for IT Only.

- 5 This project is included in the Agency EA and CPIC process. BC demonstrates business, data, and application, and technology layers of the EA in relationship to this project.
- 4 This project is included in the Agency EA and CPIC process. BC demonstrates weaknesses in the business, data, application, and technology layers of the EA in relationship to this project.
- 3 This project is not included in the Agency EA and CPIC process. BC demonstrates a lack of understanding on the layers of the EA (business, data, application, and technology).
- 2 While the agency has an EA Framework, it is not implemented in the agency and does not include this project.
- 1 There is no evidence of a comprehensive EA in the agency.

Alternatives Analysis (AA) (Part I, Section I.E)

- 5 AA includes three viable alternatives, alternatives were compared consistently, and alternative chosen provides benefits and reasons.
- 4 AA includes three viable alternatives, however work needs to continue in terms of the alternative chosen and the accompanying analysis.
- 3 AA includes fewer than three alternatives and overall analysis needs strengthening.
- 2 AA includes weak AA information overall, significant weaknesses exist.
- 1 There is no evidence that an AA was performed.

Risk Management (RM) (Part I, Section I.F)

- 5 Risk Assessment was performed for all mandatory elements and risk is managed throughout the project.

- 4 Risk assessment addresses some of the Risk, but not all that should be addressed for this project.
- 3 Risk Management is very weak and does not seem to address or manage most of the risk associated with the project.
- 2 Risk Assessment was performed at the outset of the project but does not seem to be part of the program management.
- 1 There is no evidence of a Risk Assessment Plan or Strategy.

Performance Goals (PG) (Part I, Section I.C)

- 5 Performance Goals are provided for the agency, are linked to the annual performance plan, the project discusses the agency mission and strategic goals, and performance measures are provided.
- 4 Performance Goals are provided for the agency, are linked to the annual performance plan, the project discusses the agency mission and strategic goals, and performance measures are provided yet work remains to strengthen the PG.
- 3 Performance Goals exist but linkage to the agency mission and strategic goals is weak.
- 2 Performance Goals are in their initial stages and are not appropriate for the type of project. Much work remains to strengthen the PG.
- 1 There is no evidence of PG for this project.

Security and Privacy (SE) (Part II, Section II.B)

- 5 Security and privacy issues for the project and all questions are answered, detail is provided about the individual project throughout the life-cycle to include budgeting for SE.
- 4 Security and privacy information for the project is provided but there are weaknesses in the information that need to be corrected.
- 3 Security and privacy information for the project is provided but fails to answer the minimum requirements.
- 2 Security and privacy information points to an overall Agency Security Process with little to detail at this project level.
- 1 There is no security or privacy information provided for the project.

Performance Based Management System (PB) (Part I, Section I.H)

- 5 Agency will use, or uses an Earned Value Management System (EVMS) that meets ANSI/EIA Standard 748 and project is earning the value as planned for costs, schedule, and performance goals.
- 4 Agency uses the required EVMS, is within the variance levels for two of the three criteria, and needs work on the third issue.
- 3 Agency uses required EVMS but the process within the agency is very new and not fully implemented or there are weaknesses for this individual project's EVMS information.
- 2 Agency seems to re-baseline rather than report variances.
- 1 There is no evidence of PB.

Life-Cycle Costs Formulation (LC) (Multiple Sections)

- 5 Life-cycle costs seems to reflect formulation that includes all of the required resources and is risk adjusted to accommodate items addressed in the RM. It appears that the project is planned well enough to come in on budget.
- 4 Life-cycle costs seem to reflect formulation of some of the resources and some of the issues as included in the risk adjustment strategy but work remains in order to ensure that LC costs are accurately portrayed.
- 3 Life-cycle costs seem to reflect formulation of the resources but are not risk adjusted based upon the risk management plan.
- 2 Life-cycle costs seem to include some of the resource criteria and are not risk adjusted.
- 1 Life-cycle costs do not seem to reflect a planned formulation process.

Scoring Element	Score
Business Case (BC) Total	
Supports the President's Management Agenda Items (IA)	
Acquisition Strategy (AS)	
Program Management (PM)	
Enterprise Architecture (EA)	
Alternatives Analysis (AA)	
Risk Management (RM)	
Performance Goals (PG)	
Security (SE)	
Performance Based Management System (PB)	
Life Cycle Costs Formulation (LC)	
TOTAL SCORE	

