October 30, 2002

Creating a Performance-Based Electronic Government

Fiscal Year 2002 Progress

The State-of-the-Practice on how e-Government Initiatives in Federal Agencies are Progressing Toward Achieving Cost Efficiencies and Improved Program Performance

Sponsored by

The Performance Institute

Reason

FUJITSU

Excellence
The Council for Excellence in Government

National Academy of Public Administration

PPI
Progressive Policy Institute

ASPA
Advancing Excellence in Public Service

"Show Me the Measures!"

That's what everyone has been asking for in federal IT shops since the passage of the Clinger-Cohen Act in 1994...and that's the clear mandate the Bush Administration has issued under the President's Management Agenda (PMA). In theory, performance measures are now required to justify all projects seeking funding in the annual federal budget.

What measures are federal agencies using to justify their IT projects? Do these performance measures demonstrate federal IT projects are contributing in a clear way to improved program performance and taxpayer services?

While progress has been made in implementing the Clinger-Cohen legislation and the President's Management Agenda, reviews by the General Accounting Office, agency Inspectors General, the Office of Management and Budget, and even many federal Chief Information Officers (CIO's), themselves, demonstrate that federal agencies continue to struggle with IT capital planning and performance measurement. Indeed, of the federal IT projects that do have actual performance measures, most are using project metrics—milestones showing whether the project is "on time, in scope, and on budget." Few IT project measures demonstrate a clear relationship between the project and the agency's overall mission to the public.

An Annual Progress Report on "Performance-Based" e-Government

e-Government reports have proliferated in recent years—with most reports focusing on the latest or greatest government websites or citizen expectations for e-government. These reports have been helpful in defining the opportunities and innovative ideas for building an e-government. As a result, e-government is widely accepted as a priority, resulting in federal IT expenditures that amounted to $48 billion annually at the federal level alone in FY 2002.

Putting aside the buzz around e-government these reports have created, no comprehensive initiative to date has examined the "business case" behind e-government initiatives—whether and how e-government investments are resulting in improved services for the taxpayer. Moreover, no initiative has catalogued the various ways government agencies are defining and measuring e-government contributions to agency missons.

In May 2002, a coalition of good government groups launched a research project to identify the "best practices" in defining and measuring e-government initiatives. A research team surveyed CIOs and IT staff from every federal agency to determine how they design, plan, justify, manage, and measure the success of their e-government initiatives. This report presents the findings of that research—providing case studies from various agencies and articulating a framework for the development and use of IT performance measures.

Our goal is to focus policymaker attention on demanding results from IT investments, stimulating more effective IT planning and measurement in each agency, and demonstrating to the American people greater evidence of "returns on investment." The results of this inaugural report provide a baseline for evaluating future progress in federal agency use of e-government to serve the taxpayer, which will be sustained through an annual progress report on performance-based e-government.

Table of Contents

Executive Summary 5

Chapter 1: Project Objectives and Rationale 9

Chapter 2: FY 2002 Year-in-Review - Status and Trends in e-Government 13

Chapter 3: Managing e-Government Iniatives - Lessons Learned and Recommendations for the Future 25

Chapter 4: Show Me the Measures 43

Appendix A: FY 2002 Case Studies from Agencies 53

Appendix B: Project Sponsors 101

Project Director:

Carl D. DeMaio, *President, The Performance Institute/Senior Fellow, Reason Foundation*

Research Team:

Marsie Frost, *Consulting & Research Director, The Performance Institute*
Terri Street, *Director, Operational Core Communications, Fujitsu Consulting*
Bob Tettelbach, *Vice President, Measurement Program Director, Gartner*
David Parker, Jr., *Research Fellow, The Performance Institute*
Dick D'Agostino, *Director, Management Consulting, Fujitsu Consulting*
Benjamin Neumann, *Director for Technology Strategy, The Performance Institute*
Vincent Badolato, *Research Associate, Reason Foundation*
Ian Koski, *Communications and Outreach Manager, The Performance Institute*

Executive Summary

One of the five government-wide initiatives in the President's Management Agenda (PMA), Citizen-Centered Electronic Government, focuses on the "use of the Internet to empower citizens, allowing them to request customized information from their government when they need it, not just when the government wants to give it to them." The PMA calls on agencies to focus their application of information technology on improving agency mission performance, enhancing information security, maintaining information privacy, reducing duplication, and coordinating efforts with other agencies in an integrated manner.

Despite the rush to embrace technology in government, significant confusion exists over what precisely defines e-government, let alone how to measure its impact on improving the quality of services to the taxpayer. In selecting per formance measures, agencies should focus on the definition of what constitutes a bona fide citizen-centered e-government initiative: "***Citizen-centered e-government initiatives strategically employ information technology to provide government products or services to intended users resulting in enhanced value."*** At their most basic level, mission-aligned performance measures are intended to clearly define "enhanced value" by tracking cost efficiencies and improved program mission achievement.

The research presented in this report yields insight on the progress being made by federal agencies as they struggle to define and measure their e-government initiatives.

Ten Key Themes from Agency FY 2002 e-Government Initiatives:

1. The administration and the Office of Management and Budget are cited for their strong leadership of e-government initiatives, though some improvements are needed

2. 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 solution

5. E-Government is increasingly focusing on the citizen again, but not all e-government initiatives are "Citizen-Centered"

6. CIO's 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 (FEA) is recognized as the necessary, but missing scaffolding for all agency e-government initiatives

10. Establishing clear priorities is paying off in generating attention to and sufficient funding for key e-government initiatives

The general inability of most agencies to effectively measure their e-government performance may ultimately thwart the initial gains made in the e-government arena. 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.

Fortunately, agency officials are clearly communicating their desire to improve the design and measurement of e-government initiatives—and in several cases, encouraging "helpful practices" are beginning to emerge. This report provides a good "baseline" from which progress can be tracked in the future as the federal government builds a truly citizen-centered electronic government.

Project Recommendations

- Supplement the PMA e-Government Scorecard
- Continue to Set Guidelines While Encouraging Flexibility
- Integrate IT Performance Measures with Other Agency Performance Measures as Part of a Single Strategic Management Approach
- Integrate Selection of Performance Measures with the Agency's Capital Plan and Information Technology Investment Management (ITIM) Model
- Focus on the Vital Few Measures of e-Government Performance
- Imperfect Performance Information is Better than No Performance Information
- Don't Let Lack of Baseline Information Deter Measurement Approaches
- Agencies Should Align e-Government Measurement Initiatives with Efforts to Improve Financial Management
- Expanded Emphasis by OMB on IT Performance Measures in Budget Justifications
- Harness the Power of Competition by Tasking Multiple Teams with a Common Challenge
- OMB Should Continue its Measurement of Common Programs and Expand its Common Measurement Approach to Include Common Business Processes
- Agencies and OMB Provide Room for Innovation by Encouraging Small, Scaleable and Inter-Operable Pilot Applications of e-Government Ideas

- OMB Should Begin a Transparent Process in Early 2003 for the Next Round of e-Government Priority Projects
- OMB and Congressional Appropriators Should Allow Agencies to Keep Cost Savings from e-Government Initiatives
- Expand Partnerships with Intermediaries Who Can Effectively Deliver or Add Value to Government Services
- OMB Should Expand Analysis of "Alternatives" in OMB Exhibit 300 to Include Systems Supported by Intermediaries
- Devise Common Performance Measures with Program Partners and Intermediaries
- Agencies Should Adopt Customer-Oriented Performance Measures Based on Clearly Identified Customer "Values"
- OMB Should Provide Funding and Paperwork Reduction Act Clearance for Agency e-Government Client Surveys
- Align CIO Office Structures to Agency Business Processes
- Organize Agency Business Processes-Oriented Teams Comprised of IT and Program Staff
- Improve Internal Agency Coordination
- Provide Cross-Agency Funding for Cross-Agency Initiatives
- Tackle the Issue of Privacy and Security in a Cross-Agency Context
- Expand OMB's Role in Government-Wide Standard Setting
- Use the Department of Homeland Security as a Pilot for the FEA
- Agencies Should Prioritize their e-Government Investments

Chapter 1
Project Objectives and Rationale

Does e-Government Measure Up?

That's the question this project seeks to answer. The landmark Clinger-Cohen Act and the e-government initiatives under the President's Management Agenda require the use of performance measures to justify, manage and evaluate the success of e-government initiatives. Despite these requirements, reviews of IT planning and measurement documentation by oversight agencies such as the General Accounting Office and individual agency Inspectors General demonstrate a need for clear, tactical guidance for developing and measuring successful e-government initiatives.

Beginning with FY 2002, this project seeks to track progress in the federal government's use of e-government initiatives to achieve cost efficiencies and/or program performance improvements. Most importantly, the project will serve as an evolving catalogue of "best-in-class" ways of measuring the impact of e-government initiatives.

Toward these ends, a coalition of good government groups joined together and formed a research team to survey federal agency e-government initiatives. The research project was conceived and directed by Carl D. DeMaio, noted government performance management expert, and staffed by a research team provided by the Performance Institute, Fujitsu Consulting, and Reason Foundation.

In late June 2002, an electronic advisory announcing the project and soliciting feedback was sent to a list of 3500 contacts in information technology positions in the federal government. The advisory encouraged recipients to forward the project questions on to others in their organization who might be interested in providing suggestions to the project. Additionally, the Chief Information Officers Council issued an advisory of the project to its members. Finally, the research team made numerous contacts with each department-level CIO office to solicit agency nominations of and business case information on "citizen-centered" e-government initiatives.

In the end, the research team interviewed teams of IT staff from 23 federal agencies—examining their programs, their initiatives, and their performance measures of e-government success. The research team gleaned from each interview the critical success factors, lessons learned, and ongoing challenges and risks.

Research Tasks in the Government-Wide Survey

In its survey of federal agencies, the research team focused on four key tasks:

1. Clearly Define and Identify "Citizen-Centered" IT – Define what constitutes a "citizen-centered e-government initiative." This definition serves to focus discussions with agency IT officials on truly "transformational" uses of information technology within the agency. Moreover, the project surveys each agency to identify bona fide citizen-centered e-government initiatives conceived and launched during FY 2002.

2. Identify Critical Success Factors – Identify leading practices that enhance the success of the design, justification, measurement and management of citizen-centered initiatives, examining seven areas defined by OMB budget justification guidance for IT projects:

- **Stakeholder Input**: Does the initiative respond to and measure clearly identified expectations of stakeholders and customers?
- **Budget Justification/Capital Planning:** Does the initiative clearly align to the agency's mission, IT capital plan, and existing program performance measures?
- **Program Management**: Is the initiative supported by adequate internal systems of management (including project metrics) to ensure project success?
- **Partnership/Acquisition Strategy:** Are partner and vendor contributions clearly identified and managed for results?
- **Alternatives/Risk Analysis:** Have all alternative scenarios and risks been assessed?
- **Enterprise Architecture:** Is the initiative consistent and aligned with the overall enterprise architecture defined for the agency?
- **IT Privacy/Security:** Does the project reflect and track compliance with privacy and security requirements?

3. Document Measures of Cost Savings and Improved Program Performance – Document and compare how agencies align and measure the impact such initiatives have on reducing costs and improving program performance.

4. Recognize IT "Performance Leaders" – Identify agencies deserving special attention for successful measurement and achievement of strong performance results.

Once the relevant data was compiled, the research team evaluated the information and assessed their performance impact. The initiatives were judged according to how well they met the strategic criteria and how well they demonstrated measurable performance results toward a citizen-centered e-government. The team planned to map the projects into four categories:

· Performance Case Made, Performance Results Achieved:

The project clearly articulated a performance case in its initial justification and demonstrated tangible results.

· Performance Case Made, Performance Results Not Achieved:

The project clearly articulated a performance case in its initial justification but did not demonstrate tangible results.

· Performance Case Not Made, Performance Results Achieved:

The project did not articulate a performance case in its initial justification but has since devised methods to demonstrate tangible results.

· Performance Case Not Made, Performance Results Not Achieved:

The project did not articulate a performance case in its initial justification and failed to demonstrate tangible results.

Given the overall immaturity of the agencies' efforts to define, measure and report on results, the research team decided instead to create a baseline of information, presented in the Appendix to this report, for subsequent years' evaluation.

e-Government "Performance Leader" Awards and Criteria

Based on the research team's evaluation of agency case studies, five agencies were chosen to receive special recognition as an e-government "Performance Leader." Four categories of awards were designated:

· Overall Performance Management

The winner in this category demonstrated best overall systems and methods for performance management of information technologies. Performance management capabilities included a solid IT capital plan with clear links to the agency's strategic plan, detailed business cases for proposed IT initiatives meeting the criteria of the OMB Exhibit 300 budget justification guidelines, and consistent use of mission-aligned and project-oriented performance measures focusing on tangible results.

The FY 2002 winner in Overall Performance Management was the U.S. Department of Labor.

· Achievement of Cost Efficiencies

The winner in this category demonstrated cost-efficiencies (either savings or cost avoidance) derived from the implementation of an e-government project. Agencies in this category provided evidence of reliable cost data and a direct link between efficiencies and the implementation of the e-government initiative. After consideration, the research team decided to recognize a small agency winner and a large agency winner in this category.

The FY 2002 winners in Achievement of Cost Efficiencies were the Department of the Navy and the National Science Foundation.

· Improved Program Performance Results

The winner in this category demonstrated tangible improvements in program performance achievements (outcomes, service levels, customer satisfaction, etc.) from the implementation of an e-government initiative. Program performance is defined by the GPRA performance goals of agency programs served by the e-government initiative. Agencies in this category provided reliable and verifiable evidence of performance improvements and a direct link between those improvements and the implementation of the e-government initiative.

The FY 2002 winner in Improved ProgramPerformance Results was the Department of the Treasury/ Internal Revenue Service.

· Effective Use of Partnerships and Management of Cross-Agency Initiatives

The winner in this category demonstrated tangible improvements in the development of cross-agency and inter-governmental partnerships to integrate best practices in the implementation of an e-government initiative. Agencies in this category provided evidence of significant results from surveys, focus groups, town-hall meetings, stakeholder sessions, and other such means of

communication with citizens, states and local governments, private industry, academia, and across all of government.

The FY 2002 winner in Effective Use of Partnerships and Management of Cross-Agency Initiatives was the Small Business Administration.

Anticipated Research Approaching FY 2003

During this inaugural year, this progress report certainly could not capture every single initiative being managed by the agencies. The research team focused only on e-government initiatives referenced by agency IT officials in the survey process and interviews. Moreover, in many cases, agency business cases were not available, pending review and approval by OMB. Nevertheless, more than an ample number of e-government initiatives were offered for review by the research team and a reasonable assessment of trends and activity in using performance measures and achieving performance and cost improvements could be made. It is anticipated that additional projects can be captured, studied and presented in the FY 2003 report.

Chapter 2
FY 2002 Year-in-Review: Status and Trends in e-Government

Defining Citizen-Centered e-Government

Governments are experiencing an explosion in the same technologies that in the last few years have radically changed the way people work, how companies do business, and how people live. Indeed, electronic government has become a worldwide phenomenon. More than 60 percent of Internet users (68 million Americans) visit and access services from government websites. A national study by Hart-Teeter conducted for the Council for Excellence in Government concluded: "If the 1990s were the 'Dot-Com Decade,' the first decade of the 21st century may well come to be seen as the 'Dot-Gov Decade.' "[1]

e-Government has also gone global. In recent years, in addition to progress made by the United States, governments in the United Kingdom, Canada, Australia, Singapore, India, China and Hong Kong, among others, have launched significant e-government initiatives. However, according to the June 2002 United Nations report *Benchmarking e-Government: A Global Perspective*, the United States was judged as the world leader in e-government.

[1] *e-Government : The Next American Revolution. Prepared by Hart Teeter for the Council for Excellence in Government, September 2000*

Despite the rush to embrace technology in government, significant confusion exists over what precisely defines e-government. As a result, part of this project was to offer a clear definition of what constitutes a "citizen-centered" e-government initiative:

Citizen-centered e-government initiatives strategically employ information technology to provide government products or services to intended users resulting in enhanced value. Enhanced value is characterized by improved cost efficiencies, enhanced quality and availability of product and/or service, improved timeliness, better accessibility, and improved mission achievement.

Truly citizen-centered e-government initiatives are much more than web sites that communicate static, pre-packaged information to clients, sometimes referred to as "brochureware." e-Government is a vehicle for connecting government agencies and their customers in an interactive and streamlined fashion. There are three key categories of "customers" that interact with government agencies:

- **Government to Citizen (G2C):** Individuals accessing services or information
- **Government to Business (G2B):** Organizations accessing services or information
- **Government to Government (G2G):** Partner government agencies accessing services or information—or integrating services across agency organizational boundaries through technologies.

In addition, a case can be made that even internal agency efficiencies can be translated into citizen-centered benefits by reducing the "cost-per-unit-of-service" of federal agencies and allowing for expanded external services through internal cost efficiencies.

FY 2002: Continued Evolution in Public Expectations of e-Government

Views and approaches to e-government initiatives have evolved substantially since the early 1990s. Just as the commercial sector got caught up in the "Dot-Com" boom, the 1990s were characterized by an explosion in government investments in information technology. Expectations were high—perhaps too high. As a result of the failure to meet these expectations, e-government is at a critical juncture where visibility is high and performance is being scrutinized. Simply put, the bar has been raised in the e-government world.

FY 2002: Continued Move from "Transactional" to "Transformational" e-Government Initiatives

In the 1990s, most government technology investments were directed internally, using technology to support internal agency transactions and functions—i.e. payroll automation, financial management systems, etc. Moreover, the last few years of the 1990's saw a focus on the year 2000 (Y2K) challenge—with a focus on updating legacy systems and old coding. Indeed, the theme of IT planning and measurement during this time for most agencies was reactive and designed to avert a perceived looming crisis. In short, the 1990s can best be characterized as emphasizing the "transactional" application of e-government ideas to automate existing program processes with technologies.

The first few years of 21st century are shifting the focus of e-government to more transformational applications of technology—breaking down brick and mortar systems or processes to provide services to customers electronically. Agencies now increasingly use e-government to "blow up" traditional agency processes to be replaced by technology-assisted approaches. In designing and implementing e-government initiatives, agencies are focusing externally more than ever before.

FY 2002: Aggressive e-Government Leadership by the Bush Administration through the President's Management Agenda

In August 2001, a month before the start of FY 2002, President Bush unveiled his President's Management Agenda—a five point plan to revolutionize the management of the federal government. In his agenda, the President promises a government that is ***results-oriented, market-based,*** and ***citizen-centered.***

One of the five government-wide initiatives in the President's Management Agenda (PMA), Citizen-Centered Electronic Government, focuses on the "use of the Internet to empower citizens, allowing them to request customized information from their government when they need it, not just when the government wants to give it to them."

President's Management Agenda

- Integrating Performance into Budgeting
- Citizen-Centered e-Government
- Improved Financial Management
- Strategic Management of Human Capital
- Competitive Sourcing

All 5 Goals are Inter-Related
PERFORMANCE is the Common Thread

The PMA calls on agencies to focus their application of information technology on improving agency mission performance, enhancing information security, maintaining information privacy, reducing duplication, and coordinating efforts with other agencies in an integrated manner. Agencies are taking a two-level approach: modernizing their infrastructure to deliver services more efficiently and effectively, as well as looking for opportunities to design, develop and implement cross-agency citizen-centered initiatives.

By embracing e-government as one priority tool for reforming government, the Bush Administration has underscored the need for continued investment in and use of technologies to transform agency operations and improve service to the taxpayer. (It must also be recognized that in 2002, Congress also demonstrated leadership in e-government by advancing legislation creating an e-Government Czar within OMB. This legislation is close to finalization and will likely be recognized in the FY 2003 progress report.)

> *"e-Government is not about putting thousands of government forms or reams of information online. Rather, it is about government making better use of technology to better serve citizens and improve government efficiency, cutting government's time to make decisions from weeks or months to hours or days."*
>
> THE PRESIDENT'S MANAGEMENT AGENDA

e-Government PMA Scorecard Criteria

- Strategic Value: All major systems investments have a business case that meets the requirements of OMB Circular A-11 (Exhibit 53, Form 300).
- IT Program Performance: On average, all major IT projects operating within 90 percent of Form 300 cost, schedule, and performance targets.
- e-Government and GPEA Implementation: Show department-wide progress or participation in multi-agency initiatives in three areas:
  - Citizen one-stop service delivery integrated through Firstgov.gov, cross-agency call centers, and offices or service centers
  - Minimize burden on business by reusing data previously collected or using ebXML or other open standards to receive transmissions.
  - Intergovernmental: Deploying e-grants or Geospatial Information one-stop.
  - Obtaining productivity improvements by implementing customer relationship management, supply chain management, enterprise resource management, or knowledge management best practices.

PMA E-GOVERNMENT SCORECARDS

Results of the mid-session review of agencies' progress in meeting the standards set forth in the President's Management Agenda. "Status" indicates current standing. "Progress" indicates change from the last review.

	Current	Progress		Current	Progress		Current	Progress
AGRICULTURE	Y	G	JUSTICE	R	Y	GSA	R	G
COMMERCE	Y	Y	LABOR	Y	G	NASA	R	G
DEFENSE	R	G	STATE	R	Y	NSF	G	G
EDUCATION	R	G	DOT	R	Y	OMB	R	G
ENERGY	R	G	TREASURY	R	G	OPM	Y	G
EPA	Y	G	VA	R	Y	SBA	Y	G
HHS	R	G	AID	R	Y	SMITHSONIAN	Y	G
HUD	R	G	Corps	R	Y	SSA	Y	Y
INTERIOR	R	Y	FEMA	R	Y			

FY 2002: Greater IT Budget Scrutiny and Accountability for Results

Using the PMA as a focal point, FY 2002 saw aggressive action by the Office of Management and Budget to scrutinize agency e-government budget requests. Gone are the days when "it's IT" is enough to justify an e-government initiative.

The PMA has renewed the focus on accountability for and measurement of bottom line results from government expenditures. This has certainly been true in e-government. Agencies are now "scored" on the basis of their implementation of the PMA's e-government criteria for success—receiving a RED, YELLOW, or GREEN light under a "traffic-stop" scorecard system. Only one agency—the National Science Foundation—has received a GREEN light. Most other agencies are RED, with a few YELLOWS.

In addition to scoring agencies, OMB stepped up its use of OMB Exhibit 300s to scrutinize IT budget requests. Virtually every agency interviewed confirmed OMB's increased focus on the business case of e-government initiatives. To reinforce the integration of the five PMA goals and assess individual programs, OMB has created a Program Assessment Rating Tool (PART) that specifically requests programs provide evidence of the use of information technology to improve performance and cost-efficiencies.

FY 2002: A Focus on Business Architecture

Overlapping and fragmented services and activities have been identified as a major obstacle to e-government implementation. Here the OMB e-government task force identified 28 common "business functions" present in agencies across the federal government. A focus on "business functions" provides the ability to assess potential synergies in implementing e-government initiatives, encourage cross-agency collaboration, and offer citizens streamlined, one-stop services. According to estimates by OMB, by focusing on cross-agency initiatives, over $1 billion in savings could be achieved by reducing redundant technology initiatives.

Underscoring how important the Administration views business architecture, OMB froze new IT expenditures in agencies slated to become part of the Department of Homeland Security until a comprehensive architecture design could be devised. While this caused disruption and uncertainty in the IT projects impacted, it did underscore the focus on business architecture as a priority focus in 2002.

FY 2002: Targeting "High Payoff" E-Government Initiatives

Consistent with the focus on business functions, OMB surveyed federal agencies for suggested projects that could have "high payoff" to the taxpayer. Over 350 projects were considered for priority action. Ultimately, OMB, working with an 80-person e-government task force, designated 24 priority e-government projects to emphasize in the implementation of the PMA.

OMB worked with agencies involved in these projects to craft business cases, focusing on estimates of benefits, costs and risks. The business cases confirmed the initiatives held the greatest potential to improve citizen service. Many could deliver internal efficiencies and streamline operations. Several could reduce burden to the taxpayer, businesses, or intergovernmental partners. The initiatives selected had the ability to cross government and agency boundaries and provide across-the-board applications for citizens, businesses and other government agencies and organizations. Finally, the initiatives could be implemented within 18 to 24 months—offering a payoff and providing early success stories and lessons learned.

In each of the initiatives, OMB created a steering committee, set milestones for project implementation, coordinated cross-agency collaboration, and worked with budget officials to ensure funding availability. Implementation of the priority e-government projects has, in most cases, proceeded according to plan.

FY 2002: A Tour of Agency Initiatives

Federal agencies are developing hundreds of new IT initiatives aimed at implementing e-government strategies and objectives. Many proceed without much fanfare or attention. During this inaugural year, the research team could not capture every single initiative being managed by the agencies; however, it is anticipated that additional projects can be captured, studied, and presented. What follows is a quick tour of agency e-government initiatives underway in the largest agencies of the federal government.

Firstgov.gov

No tour of agency e-government initiatives would be complete without recognizing the federal government's primary portal: www.firstgov.gov. Launched just three years ago, firstgov.gov continues to expand services, streamline organization, and attract visitors. FY 2002 saw FirstGov emphasize the "three clicks" strategy: reducing access to services to three queries or less. The results have been impressive: FirstGov has seen a 50 percent increase in visitors, with Yahoo! naming it one of the Internet's most "incredibly useful websites."

Government to Citizen	Government to Business	Government to Government
Recreation One-Stop *Department of Interior*	Online Rulemaking Management *Department of Transportation*	Geospatial Information One Stop *Department of Interior*
Eligibility Assitance Online *Department of Labor*	Expanding Electronic Tax Products *Department of Treasury/IRS*	e-Grants *Health & Human Services*
Online Access for Loans *Department of Education*	Federal Asset Sales *General Services Administration*	Disaster Assistance and Crisis Response *Federal Emergency Management Agency*
USA Services *General Services Administration*	International Trade Process Streamlining *Department of Commerce*	SAFECOM *Federal Emergency Management Agency*
EZ Tax Filing *Department of Treasury/IRS*	One-Stop Business Compliance Information *Small Business Administration*	E-Vital *Social Security Administration*
	Consolidated Health Informatics *Health & Human Services*	
Internal Efficiency	**Enterprise HR Integrations**	**Internal Efficiency**
e-Training *Office of Personnel Management*	Integrated HR and E-Clearance *Office of Personnel Management*	e-Authentication *General Services Administration*
Recruitment One-Stop *Office of Personnel Management*	e-Payroll/HR *Office of Personnel Management*	
	e-Travel *General Services Administration*	
	Integrated Acquisition Environment *General Services Administration*	
	Electronic Records Management *National Archives and Records Aministration*	

Department of Agriculture

The Department of Agriculture is an active partner in 18 of the government-wide e-government initiatives. For example, in GovBenefits, Agriculture has provided citizen centered content in areas including Farm and Crop Insurance programs, Rancher Assistance Programs and assistance programs for agriculture workers with disabilities. In Recreation One-Stop, Agriculture is providing a searchable database of recreation areas across the nation complete with services for reservations and camping passes.

Department of Commerce

The Department of Commerce is developing a number of e-government initiatives to support its overall mission. The implementation of a Review Board (which includes the Deputy Secretary, the Chief Financial Officer and the Chief Information Officer) for IT strategy and initiatives ensures that top level leadership from across the agency are engaged in the decision process to invest in and develop IT initiatives. They are also the managing partners on the OMB sponsored e-government initiative: International Trade Process Streamlining. The initiative combines 20 websites to create a single customer-focused site (export.gov) where new or existing exporters could be assisted electronically through the entire exporting process. Last summer, Commerce launched the Export-Import Bank's Working Capital Automation Program to provide short-term financing to exporters. Future enhancements to export.gov plan inclusion of insurance filing processes and products

Department of Defense

The Department of Defense (DoD) uses, develops, and produces a large number of technologies and technological applications that are eventually adopted by civilians and civilian agencies. Examples include laser technologies, self-serve gas pump payment technologies, IT software, MRI systems used in healthcare, and geographical positioning Systems (GPS's). In its interviews with the research team, DoD reported progress in developing metrics to correlate program performance

with budgeting decisions for the FY 2004 budget. In addition, two agencies of DoD participated in this research endeavor:

- The Army has developed Army Knowledge Management (AKM), a transformation process through which the Army gathers, manages and deploys information throughout the entire organization. The process will promote innovation and elevate best practices quickly and efficiently.
- The Navy has formed an eBusiness Ops Office, which has already funded more than 30 initiatives. One of the projects, Medical Appointments on the Web, was selected by the Service Deputy Surgeons General for implementation across the entire DoD.

Department of Education

The Department of Education is consolidating its myriad data collections—some of which still use pencil and paper—and replacing them with a centralized, consolidated, electronic system in its Performance-Based Management Initiative. The business case for the Performance-Based Management Initiative was cited by OMB and other agencies as a "best practice model." The department studied and utilized the successful best practices from other smaller-scaled programs, to design the initiative. The department developed an effective collaboration and partnership with the states to maximize results of both federal and state efforts to gather and assess performance data.

Environmental Protection Agency

The Environmental Protection Agency (EPA) is working with states, local governments and tribes on the National Environmental Information Exchange Network and the related Central Data Exchange to reduce reporting burdens, make data collection and access more efficient, and improve public participation in the rulemaking process. Moreover, EPA is improving its management of the Toxic Release Inventory Initiative by designing a technology-assisted process to reduce reporting burden while improving public access to information on environmental concerns. Another initiative, EDOCKET, contains materials concerning proposed rulemaking for the process of regulating environment-related activities and operates using the Internet. Citizens who wish to participate in the rulemaking process may do so by offering their comments for proposed regulations electronically over the Internet. They may also search for all comments made by others, as well as the language of the proposed regulations — all available as PDF files for screen review or downloading. Finally, EPA is focusing significant attention on the cross-cutting initiatives, such as e-Rulemaking, One-Stop Business Compliance, e-Authentication and Recruitment One-Stop.

Department of Energy

The Department of Energy spent FY 2002 "catching up" by assessing more than 300 possible e-government opportunities and ultimately deciding on 19 of them for implementation. Energy also spent considerable time working with OMB devising a comprehensive e-government plan for the agency and recently unveiled a new e-signature initiative that promises to revolutionize government transactions with citizens.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is the managing partner on two of the OMB sponsored e-government initiatives:

- Disasterhelp: Disasterhelp.gov is an online information site designed to help citizens and organizations respond to disasters. A pared-down version of the site went online in late September. FEMA officials have scheduled the full rollout of the portal for late October. The disaster response portal, one of the original 24 Quicksilver e-government projects, currently has links to content from 27 agencies. FEMA had delayed unveiling the portal because some partner agencies were behind schedule in providing content.

- SAFECOM (Wireless Public SAFEty Interoperable COMmunications) The initiative will address the shortcoming in efforts by public safety agencies to achieve interoperability and eliminate redundant wireless communication infrastructures resulting in coordinated public safety/law enforcement communications. A joint Justice and Treasury department wireless infrastructure effort continues under FEMA's guidance. FEMA has established an interagency PMO that will begin work with state and local governments to implement the plan. It also has appointed a steering committee composed of representatives from user groups such as the International Association of Chiefs of Police.

General Services Administration

The General Services Administration (GSA) is the managing partner on five of the OMB sponsored e-government initiatives. Establishing a Program Management Office has enabled GSA to leverage talented resources across initiatives to achieve on-going success.

- e-Authentication: The project will establish common interoperable authentication solutions for all of the OMB cross-agency e-government initiatives. On September 25, 2002, there was a unveiling of the "Authentication Gateway" prototype for partner agencies. The authentication gateway will consolidate the validation of multiple levels of authentication so security and privacy are enabled allowing the government to trust individuals doing business on-line with the agencies.
- e-Travel: In October 2002, GSA released a draft RFP for a government-wide online travel management system which will consolidate existing travel management resources from across the federal government for a cheaper and more efficient operation. GSA plans to roll out an online booking engine—the first iteration of the E-Travel project—by December. The projected timeline for completion of the full travel management system is December 2003.
- Integrated Acquisition Environment: Agencies will begin sharing common data elements to enable other agencies to make more informed procurement, logistical, payment and performance assessment decisions. It will make the purchase of goods and services faster and more efficient and allow more access to small business. GSA remains on target to award a contract for a Federal Data Procurement System by January 2003.
- USA Services In June GSA established the Office of Citizen Services, to oversee this initiative. The goal of this initiative is to allow citizens to personalize their government services in a secure environment.
- Federal Asset Sales: Prospective customers will be able to find assets through a single site (rather than the original 150 sites) regardless of which agency owns the assets. Customers will be able to bid and/or purchase electronically. In July, the FedSales.gov site was migrated to the FirstGov portal for enhanced search capability. The pilot transaction portal is in production and scheduled for release March 2003.

Department of Health and Human Services

The Department of Health and Human Services (HHS) is the managing partner of two of the OMB-sponsored e-government initiatives. e-Grants will create a single electronic grants portal for grants recipients and the grants making agencies that will streamline, simplify and provide an electronic option for grants management across the government. An agreement setting data standards has been reached with partnering agencies, universities, and non-profits. Unfortunately, HHS has fallen slightly behind with its e-grants system; a prototype system will not be available for launch until October 2004. Consolidated Health Informatics would enable agencies and private health care providers to share and reuse medical information. Again, HHS has encountered a challenge in finalizing and getting consensus on proposed data standards for use across the medical communities.

Department of Housing and Urban Development

The Department of Housing and Urban Development (HUD) emphasized services and partnerships in its 2002 e-government strategies. "Your Path to Home Ownership" is a website that provides information to first time homebuyers and utilized an innovative customer-driven design. "Network Neighborhoods" aims to bridge the digital divide by partnering with businesses and communities to provide technology access low and moderate income residents living in HUD multi-family assisted and/or insured housing. Initial program evaluations of Network Neighborhoods provide evidence of reduced crime, increased income and community involvement of users, and improved academic achievement of children. Finally, HUD Homes is an Internet site that provides information on homeownership, applications for FHA loans, and a purchase point for sales of foreclosed homes.

Department of Interior

Building upon "Recreation.gov", the Department of Interior is connecting citizen volunteers with service needs, sharing biological information and enhancing the value to citizens of the nation's vast parklands by connecting them through a website to recreational opportunities. Another Interior sponsored site, Geospatial One-Stop, will provide access to all of the spatial data assets across the government and facilitate collaboration with state a local governments to reduce duplication of assets and efforts. In August 2002, OMB released a revised circular A-16 setting new guidelines for collecting and maintaining geospatial data. The team currently is defining data standards for critical spatial data themes with a revised target completion date of January 2003.

Department of Justice

The Department of Justice is a partnering agency in 19 of the federal cross-agency e-government initiatives, contributing content and information resources, with particular emphasis on SAFECOM (see FEMA for description). In addition, Justice is implementing other initiatives such as Electronic Case Filing – bringing together the needs of the courts and the attorneys; the Drug Enforcement Administration's Diversion Control initiative – an effort to ease reporting burdens on the medical industry; and the Entry/Exit Visa Program, designed to improve the capability to fight terrorism and enforce immigration laws in collaboration with other federal, state, and local law enforcement agencies

Department of Labor

The Department of Labor initiatives are characterized both by strong project management and creative innovations. Their aggressive approach to the launch and updating of GovBenefits has helped to maintain the momentum of the partnership. GovBenefits now receives over 50,000 visitors per week. The Department's in-house e-authentication initiative started with a creative competition designed to surface the best transformation idea for the agency.

National Science Foundation

The National Science Foundation (NSF) has enhanced grants processing performance through two initiatives FASTLANE and PRAMIS. In 2002 they accommodated a 19 percent increase in applications with a 33 percent reduction in handling costs. Ninety-nine percent of NSF proposals are now handled online. During FY 2002, NSF became the first federal agency to receive a green "status" score under the PMA scorecard—meeting all core criteria and developing a process to implement corrective action plans for program level information technology security weaknesses.

National Archives and Records Administration

The National Archives and Records Administration is the managing partner for the Electronic Records Management initiative that will provide the tools that agencies will need to manage its records in electronic form. It is anticipated that the agency will publish a policy by January 2003.

Office of Personnel Management

The Office of Personnel Management is the managing partner for four OMB-sponsored e-government initiatives:

- The e-Training initiative will provide a repository of government owned courseware to give easy one-stop access to just-in-time training. In July, the agency launched golearn.gov.
- The Recruitment One-Stop initiative will allow job seekers to enter their resume information once to apply for vacancies across agencies and it will provide to the agencies faster access as well as automated tools for selecting candidates.
- The e-Payroll effort will simplify and unify elements of the payroll HR process to consolidate and integrate HR and payroll systems across government. The agency is due to announce the three agencies that will take over the payroll processing for all others. Once the decision has been made agencies will have an opportunity to review the selected departments. The team also is addressing the necessary resultant downsizing.
- The Enterprise HR Integration initiative will eliminate the need for paper employee records.

Small Business Administration

The Small Business Administration (SBA) is participating in 10 government-wide e-government initiatives. SBA is managing partner of One-Stop Business Compliance an initiative that provides information on laws and regulation and offers tutorials to help users understand compliance information. There are plans to include filing for permits on-line where feasible. A first release allows small businesses to apply for an IRS EIN (Employment Identification Number) online. A profiler tool that will allow business owners to determine by industry which laws and regulations apply to them is under construction. In January 2003 SBA hopes to release a pilot vertical registration tool for the trucking industry in Illinois that will allow registration with the Federal Government on-line. Eventually all state and local governments will be linked through the site.

Social Security Administration

The Social Security Administration (SSA) is the managing partner of e-Vital. At the end of FY 2002 the Agency initiated an application live and on-line in Colorado that will give immediate online verification of birth and death information directly from state agencies. The initiative will expand to seven more states in the coming weeks. Through e-Vital, SSA expects to speed processing of benefits as well as the applications for Social Security numbers. The initiative will continue to expand the on-line data exchange of vital records between Federal Agencies and State Governments. The agency has built a Usability Center to elicit stakeholder input critical to the success of their initiatives.

Department of State

The Department of State, with fresh vision from the Secretary, is embracing technology to help cross-agency communication within embassies and providing all levels of state department employees with access to the abundant sources of information on the web. The Foreign Affairs Systems Integration (FASI) pilot provides knowledge management information technology to improve the collaboration among numerous U.S. foreign agencies and other international entities. After a State Department advisory panel found U.S. embassies needed improved cross-organizational capabilities, the Department of State developed a strategy for a comprehensive extra-net. The project aims to streamline information sharing and collaboration among agencies at U.S. embassies around the world.

Department of Transportation

The Department of Transportation (DOT) is the managing partner of Online Rulemaking Management that provides a single portal for businesses and citizens to access the rulemaking process anytime to facilitate more collaboration between agencies and more participation by the public. In April 2002 a first step was to link all agency's docket sites through First.Gov. In September 2002, load testing revealed that the site might not accommodate the anticipated heavy traffic resulting in a delay of launch. Finally, DOT's "Do It Yourself" (DIY) website provides customers the option of doing business with the DOT at their convenience, seven days a week, twenty four hours a day through the Internet. Virtually every function requiring payment from the public will be available on the Internet, creating a citizen-focused portal for customer service. Customers may pay fines and fees; apply and pay for registrations and licenses; and request and pay for publications, data, and files by using their credit cards or by debiting their bank accounts via Automated Clearing House payments.

Department of Treasury

Treasury is the managing partner on two initiatives.

- Simplified Tax and Wage Reporting System: The goal of the initiative is to decrease the number of tax-related forms that an employer must file, as well as to increase electronic tax filing capability. In February of 2002, IRS began accepting filing of W-2's on-line. The next phase, is the deployment of an interim solution to allow employers to apply for EIN's on-line. By January 2003, IRS will accept on-line filing of corporate and tax-exempt returns.
- EZ Tax Filing: In July, the IRS reached a milestone agreement with on-line software vendors. Through this collaboration with vendors, citizens have access to online tax filing (60% of the population will have this service free of charge, with a small fee to the rest). The consortium is linked through the IRS website. Through this innovative approach, peak filing volumes are distributed. In addition, IRS avoids the pitfall of competing with private industry.

Department of Veterans Affairs

The Department of Veterans Affairs (VA) laid significant groundwork in FY 2002 for ongoing e-government initiatives. VA presented an architecture implementation plan in FY 2002, revised its business case development process, and developed a corrective action plan for computer security. Additionally, VA is rolling out a benefits management initiative that will be underpinned by a single point of access through the web as well as through a call center.

Chapter 3
Managing e-Government Initiatives: Lessons Learned and Recommendations for the Future

In its survey of federal agencies, the research team compiled a running list of observations, lessons learned, and potential recommendations for improvements in the way federal agencies manage e-government initiatives. Presented in this chapter are the leading lessons learned and recommendations validated by most of the interviews and case studies. Some of the lessons learned celebrate progress points; others reflect continuing obstacles or challenges. Most recommendations apply to federal agencies themselves, offering ideas on how to internally improve their management of e-government initiatives. However, in several cases, recommendations are directed specifically at the Administration and Congress.

1. The Administration and the Office of Management and Budget Are Cited for their Strong Leadership of e-Government Initiatives, Though Some Improvements are Needed

At almost every interview, the Administration—and in particular the Office of Management and Budget—were praised for their strong interest in and leadership of e-government initiatives. There is a clear appreciation of the importance the Administration places on e-government. Additionally, the President's Management Agenda (PMA) is getting significant attention in each agency. While many agencies may not like being scored under the PMA traffic light criteria, many indicated the desire to "Get to Green"—an indication to the research team that the scores are at least getting attention and communicating importance.

To be clear, agencies did not universally agree with all of the decisions in e-government made by OMB. There were four key criticisms raised by agency officials, focused on the budget and the management side of OMB:

- **Unfunded Mandates:**
  Some officials felt as though OMB tells agencies what needs to be done, but does not provide agencies with the money or resources to develop and implement the projects. When e-government initiatives are not specifically funded, the agencies spend a disproportionate amount of energy figuring out how to fund them 'creatively,' often leaving in doubt any needed long-term and on-going maintenance funding. As one agency representative stated: "We're having to rob Peter to pay Paul."

- **Changes to Timelines:**
  On some projects, including the 25 priority e-government initiatives, project timelines are sometimes changed without discussion or agreement, requiring agencies to reach certain objectives by specific dates. Managers across the government claim that they have to cut corners, neglect other obligations, and rush development of initiatives in order to meet these deadlines.

- **Changes to the Rules:**
  OMB provides the rules and directions for agencies to develop and implement their e-government strategies and initiatives. A number of agencies report frustration with frequent changes. Whether caused by the ongoing learning process or by the bigger picture political debate, the frequency of change gives agencies the impression OMB directives lack consistency and follow through.

- **'Cookie Cutter' Approaches:**
  Agency representatives also voiced some distress with what they call OMB's "cookie cutter" approach to initiatives. In its zeal to offer template solutions that leverage success in one agency, OMB does not always recognize the unique and nuanced situations that agencies believe they face in developing e-government initiatives that align with their specific missions and respond to the needs of their constituencies.

Recommendations:

Supplement the PMA e-Government Scorecard

Several agencies suggested additions or clarifications to the OMB PMA scorecard. Substantial progress was made in the "Budget-Performance Integration" element of the PMA scorecard when OMB devised a much more detailed assessment tool with the PART. OMB may want to devise an e-government version of the PART directly aligned to the PMA scorecard assessment criteria. Ideally, this version of the PART would bridge the existing framework provided by the OMB Exhibit 300s with a program-aligned set of criteria more tied with agency mission achievement.

Continue to Set Guidelines While Encouraging Flexibility

Criticisms raised by agency officials may be unavoidable. Budget pressures will always reflect the reality that there is never enough funding to fund every initiative. However, in areas where OMB can provide better communication with agencies on guidelines, timelines and approaches, it should serve as feedback that more progress needs to occur in these areas.

2. Agencies Generally Fail to Use Mission-Aligned IT Performance Measures to Justify, Manage and Evaluate the Success of e-Government

The overall driver behind this project has been to identify what measures federal agencies are using to justify, manage and evaluate the success of e-government initiatives. In the research team's survey of federal agencies and in one-on-one meetings, examples of specific IT performance measurements were sought. While the research team understood from the beginning that some federal agencies continue to struggle with defining meaningful, results-oriented performance measures, it became clear that performance measurement in information technology continues to lag.

In most cases, the research team did not receive meaningful performance measures for the case study they examined. Indeed, some agencies reported no means of measuring e-government performance. Where performance management existed, it was primarily based on anecdotal evidence and lacked a robust, systematic process for gathering and reporting performance management data. On the positive side, agencies clearly indicated they understood the importance of using mission-aligned performance measures and were eager to hear from the research team what kinds of measures other agencies were using. Moreover, a few agencies presented excellent examples of mission-aligned performance measures—a clear indication that it is possible to measure the results of e-government.

Nevertheless, an inability to effectively measure e-government performance ultimately will thwart the initial gains made in the e-government arena. Of the $48 billion spent on information technology in FY 2002, our 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.

Recommendations:

Integrate IT Performance Measures with Other Agency Performance Measures as Part of a Single Strategic Management Approach

Performance measures should not be devised on a project-by-project basis, as this will lead to an undesirable proliferation of measures, and counter the push to integrate agency programs, functions and activities into a cohesive whole.

Integration is a necessity for developing effective e-government measures. As demonstrated in the previous section, e-government initiatives are dependent on the goals and measures of the programs they are enabling. Without appropriate goals and measures for agency programs, effective measurement of e-government's contribution to the agency's mission will be difficult. (Please See Figure 1: Government Performance Logic Model)

Integrate Selection of Performance Measures with the Agency's Capital Plan and Information Technology Investment Management (ITIM) Model

Just as a linkage is needed to the overall agency strategic management system for all programs, performance measurements for e-government initiatives must be directly aligned to the agency's capital plan and investment management approach. The logic model approach to examining program performance tracks the same kinds of analysis conducted in the context of IT capital planning and investment review. Using the US General Accounting Office ITIM Assessment model, unless an agency is at Stage 1, performance measures are important tools for informing decisions at Stages 2-5. (Please See Figure 2: ITIM Assessment Model)

Focus on the Vital Few Measures of e-Government Performance

Agencies should resist the temptation to over-measure and should approach the selection of measurement in a flexible manner. Should they find a measure is not providing important information for decision-making, the measure should be discontinued. OMB has articulated policies and procedures in Circular A-11 for revising performance measures. Agencies should consult this circular as they eliminate unnecessary measures.

Imperfect Performance Information is Better than No Performance Information

Agencies should not shy away from imperfect data. If the data is accurate and reliable enough to judge progress and inform decision making in the e-government initiative, there may not be a need to improve the quality of data. In order to ensure validity and verification standards are met for performance information, agencies should share e-government measures and data sources with their inspectors general for an assessment of the quality of the data. Independent evaluations can also assist in evaluating the quality of agency data sources.

Don't Let Lack of Baseline Information Deter Measurement Approaches

Even in those agencies that are working diligently to create accurate, effective performance measures, many officials report being challenged by a lack of baseline information. Without reliable and complete baseline data, agencies lack a solid foundation from which to measure whether the changes in performance produced by an e-government initiative over the old brick-and-mortar approaches. Despite the usefulness of baseline information, agencies should not shy away from measures they consider meaningful if baseline information does not exist. "Year One" can always serve as a baseline, with improvements identified in later years. In setting targets, should a baseline demonstrate that a target was not appropriate, the target can and should be revised.

Agencies Should Align e-Government Measurement Initiatives with Efforts to Improve Financial Management

Many agencies are not able to measure cost efficiencies of e-government initiatives reliably given the inadequate cost information provided by their internal financial management and accounting systems. The President's Management Agenda goal for Improved Financial Management already calls on agencies to improve their cost accounting systems. One approach agencies might find useful is Activity-based Costing (ABC) which many agencies are in the process of implementing. Like the planning phase of e-government initiatives, ABC systems are structured around business (work) processes utilized to deliver products and services (outputs). Moving towards ABC may provide agencies with much-needed synergy between exploring e-government opportunities and ultimately measuring the cost efficiencies resulting from e-government implementation. Regardless of whether an agency chooses an ABC approach, e-government measurement of cost efficiencies will require some improvement in most agency financial management systems. (Please See Figure 3: The ABC/M Cross)

Expanded Emphasis by OMB on IT Performance Measures in Budget Justifications

OMB has made significant progress in demanding better performance "business case" justifications from federal agencies through the OMB Exhibit 300 process. However, many of the projects reviewed by the research team that did not contain effective mission-aligned performance measures had already won OMB approval. Moreover, several of the leading government-wide projects failed to provide mission-aligned performance measures. OMB should continue to emphasize mission-aligned performance measurement as a key factor for approving ALL IT budget requests. In addition to scrutinizing IT budget requests, OMB should expand the e-government question in the program-based "Program Assessment Rating Tool" to require each program to identify which government-wide business processes they fall within and how they are using their own information technology solution (or one of the cross-agency systems) to improve those processes.

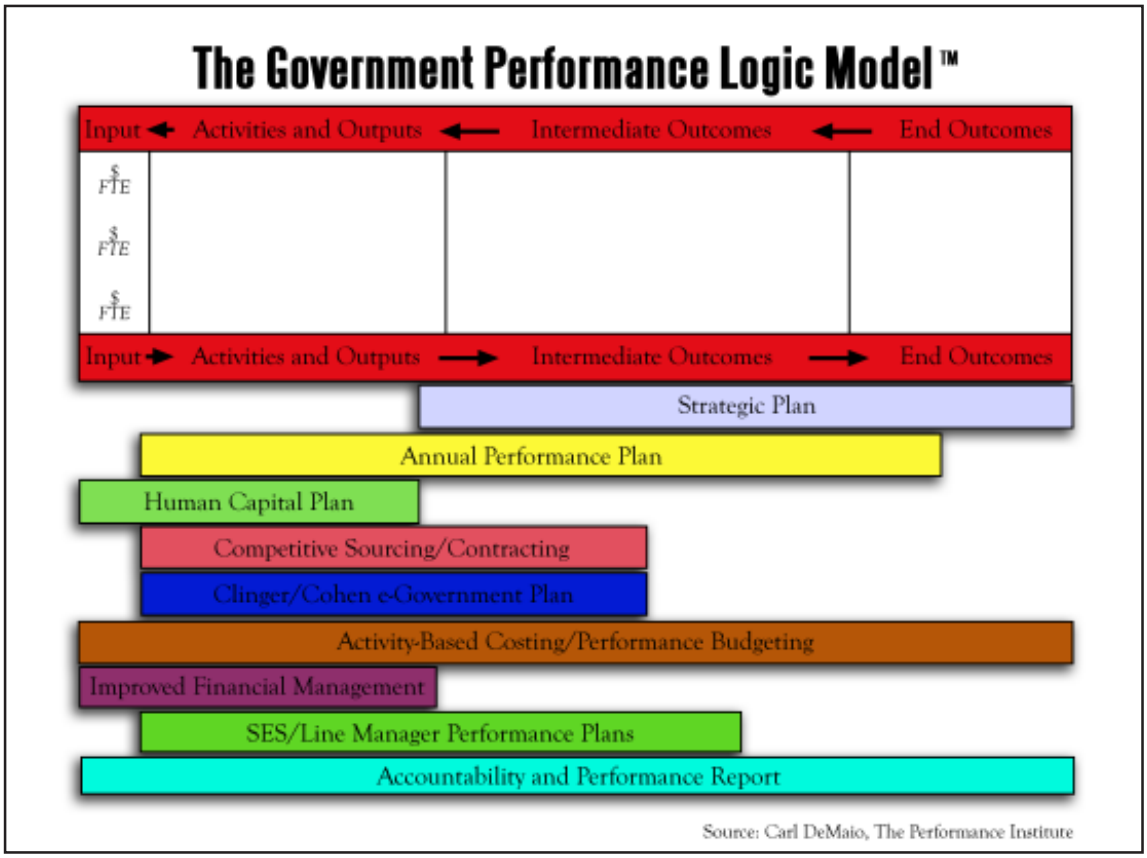


Figure 1: The Government Performance Logic Model

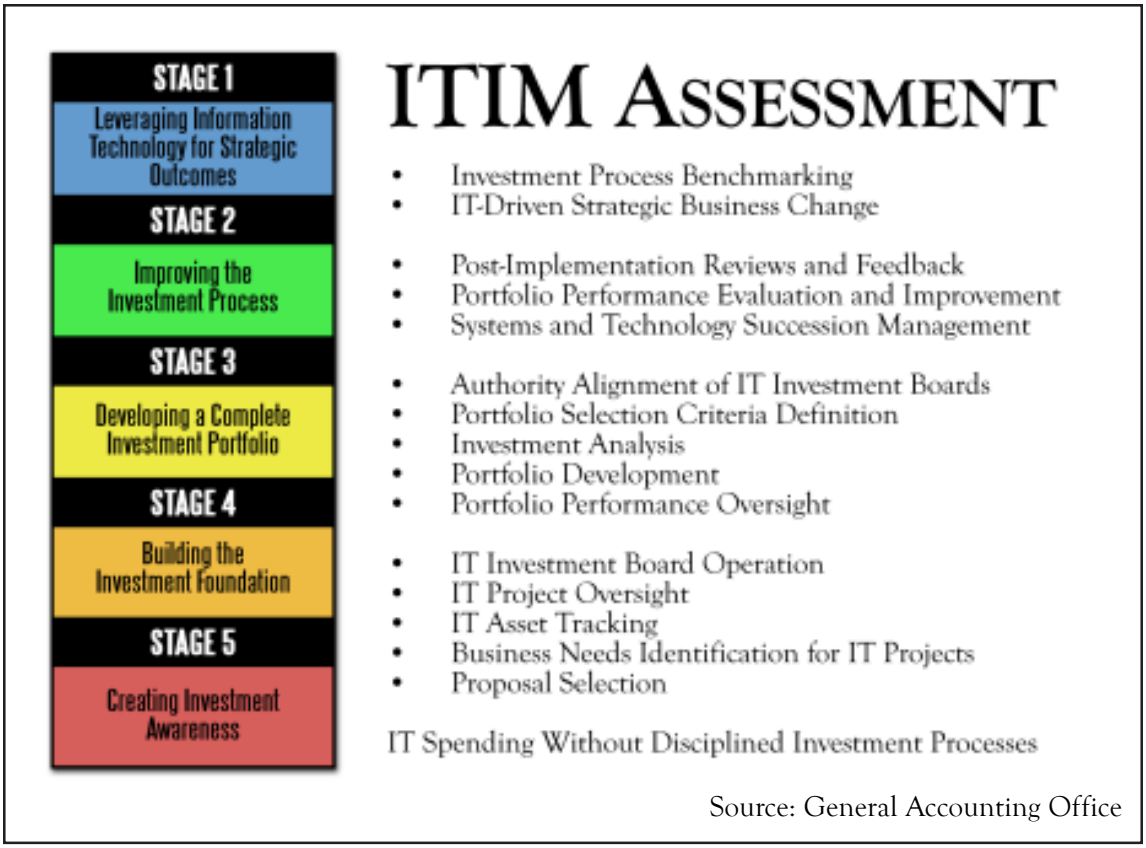


Figure 2: ITIM Assessment Model

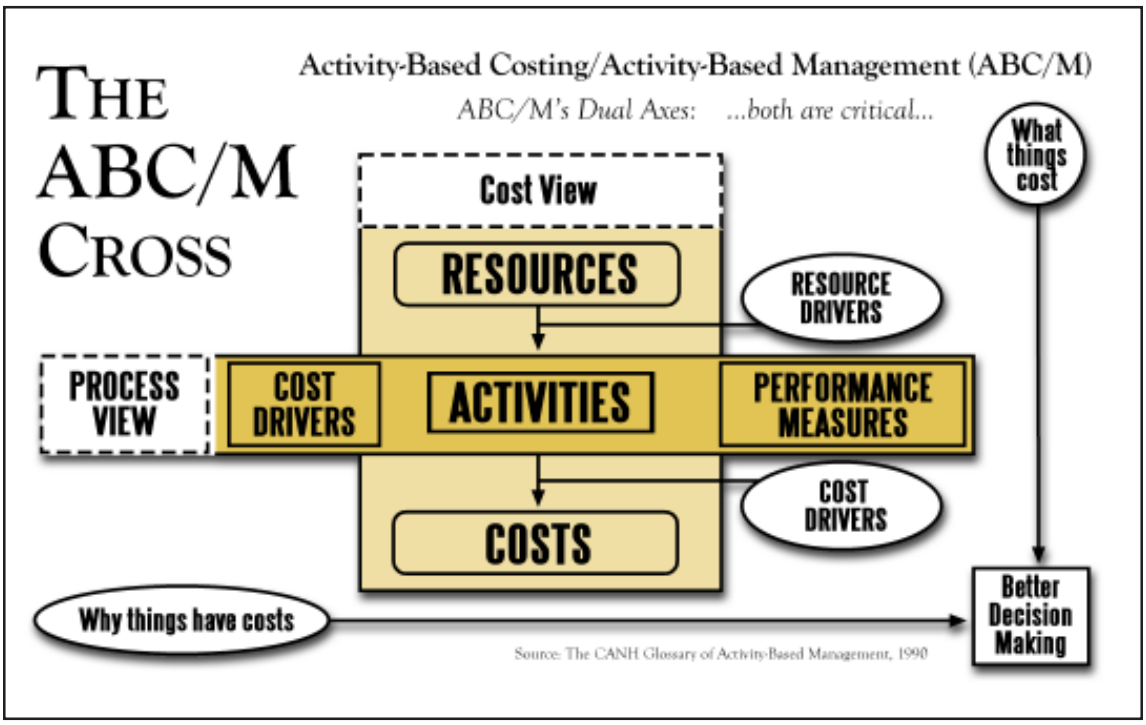


Figure 3: The ABC/M Cross

3. Agencies Need to Become More Creative and Willing to "Blow Up" Old Program Structures Throught the Use of Technology

Technology can enable innovation and foster creativity. Unfortunately, agencies may be too wed to the old ways of doing business to see opportunities presented by technologies. As noted earlier, agencies in the past invested in improving existing processes rather than fundamentally rethinking how they do business and how technology can assist in that transformation. Very few agencies have been asking the key question: "If we weren't doing it this way today, would we start tomorrow?" While great strides have been made in integrating processes and creating collaborative efforts and systems among agencies, levels of government and between government and industry, much more can and should be done to push the envelope.

Recommendations:

Harness the Power of Competition by Tasking Multiple Teams with a Common Challenge

Agencies may want to consider implementing an innovative approach used by the Deptartment of Labor to generate ideas for an internal e-authentication project. Two separate teams were given the same task to advance ideas for e-authentication under the same timeline and pursuant to the same standards.

OMB Should Continue its Measurement of Common Programs and Expand its Common Measurement Approach to Include Common Business Processes

In preparation for the FY '04 budget, OMB articulated common performance measurements for a variety of programs (wildland fire management, food safety, job training, etc.) in the federal government. OMB may want to articulate common measures for the government-wide business processes and use them to compare various program efficiencies. Moreover, agencies should be asked how they have examined "best-in-class" business functions of leading government programs to adopt lessons learned within their own. By providing these government-wide benchmarks and sustaining a level of oversight, OMB can help create a "race-to-the-top" culture that pushes the envelope on the use of technology in government.

Agencies and OMB Provide Room for Innovation by Encouraging Small, Scaleable and Inter-Operable Pilot Applications of e-Government Ideas

Particularly within the priority e-government initiatives, agencies are realizing the potential and the importance of developing pilots that are flexible enough to be applied on vastly different scales. Agencies should recognize that "blowing up" traditional processes can be insufficient... and might not result in a better process. A small and contained project can be tested. Once proven, initiatives can be expanded and applied elsewhere, within an agency, across agencies or levels of government, or into industry. If at any time it becomes clear that an initiative is veering off track, or if a project is heading toward outright failure, the program can be realigned or cancelled, freeing up resources to be redeployed to projects with a greater possibility for success.

OMB Should Begin a Transparent Process in Early 2003 for the Next Round of e-Government Priority Projects

When OMB developed its priority e-government initiatives, it reviewed over 350 different e-government initiatives suggested by federal agencies. There was little transparency during that process; few line managers, let alone the public, knew of the process. As the projects from the first round are nearing completion, OMB should initiate an open and inclusive process during 2003 to solicit ideas from federal line managers, federal partners and the public on what the next priority e-government projects should be. As worthy submissions are made, those projects should be available on the Internet for comment and additions.

OMB and Congressional Appropriators Should Allow Agencies to Keep Cost Savings from e-Government Initiatives

One way to jumpstart agency e-government thinking is to incentivize creative and transformational thinking. A good mechanism to do that lies with the budget. At present, most agencies are told to pay for an e-government initiative out of the existing budget—indeed, even told that future cost savings will more than finance the project. Agencies need start-up investments—it is hard to pay today's invoice with tomorrow's expected savings. Most importantly, agencies should be rewarded for innovation with assurances that efficiencies will be available to put back into the program served by the e-government initiative.

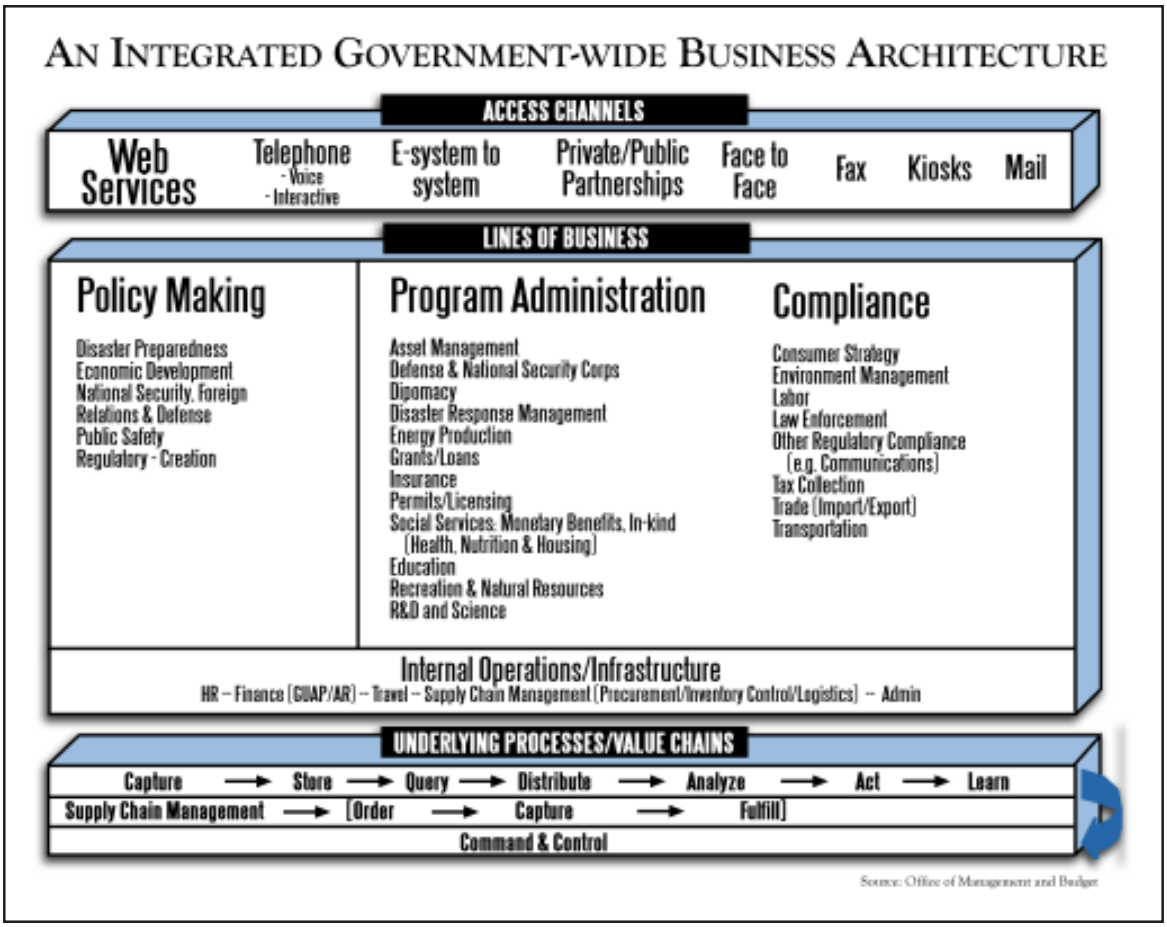


Figure 4: Integrated Government-wide Business Architecture

4. Non-Governmental Intermediaries Are Providing Greater Opportunities to Borrow Rather than Build an e-Government Solution

"Don't build it, borrow it." That's what some e-government managers are learning is the best approach to achieving e-government goals. A 2001 Gartner survey of European citizens in the United Kingdom, Germany, France, Italy, and the Netherlands revealed some interesting results that reinforce this approach. Respondents expressed a strong desire for information rather than for transaction services. Among transaction services, citizens valued services with infrequent interaction (e.g. car registration, change of address) over services with more frequent interaction (e.g. tax filing). Less than half of the survey respondents thought that single portals were important. Interestingly, more than 65 percent of respondents felt that intermediaries (e.g. accountants, consultants, brokers, banks, insurance companies, etc.) will play an increasingly important role in providing future e-government services. As e-government evolves, different groups of constituents will be willing to access government services through different channels. For instance, businesses or intermediaries with frequent government interaction may prefer to keep interacting on the basis of the actual government organization, rather than through an integrated, one-stop approach that may be more suitable for first-visit customers.

Recommendations:

Expand Partnerships with Intermediaries Who Can Effectively Deliver or Add Value to Government Services

Agencies should aggressively seek funding and partnerships with for-profit and non-profit intermediaries to support e-government goals. These partnerships have to be mutually beneficial—a major culture change for most agencies believing that a public service should be provided to the public free of charge. Nevertheless, there are numerous examples of effective, value-added partnerships supporting e-government goals. The National Oceanic and Atmospheric Administration (NOAA) is an excellent example of this strategy. Much of the data and information generated by NOAA on weather conditions is repackaged, added to, and delivered to the end users. The Department of Interior is employing a similar approach to partnering with recreation vendors to support Recreation One-Stop. Finally, the IRS partnered with a consortium of private companies on EZ File where the vendors devised and funded much of the e-government strategy. Sixty percent of the services through EZ File will be free, with 40 percent accessible through fee for service.

OMB Should Expand Analysis of "Alternatives" in OMB Exhibit 300 to Include Systems Supported by Intermediaries

The use of intermediaries and formation of partnerships with vendors will represent a significant culture change for most federal agencies. OMB should provide the impetus for the culture change by requiring in IT budget justifications an assessment of non-governmental avenues to delivering the service being improved through e-government. If alternatives exist, agencies should be encouraged to explore them fully before building a new system on their own.

Devise Common Performance Measures with Program Partners and Intermediaries

Consistent with the challenge identified in Chapter Three of coordinating inter-agency e-government initiatives, agencies should work to define common performance measures that would be used by all partners in a multi-agency initiative. Common measures should allow all participating agencies to focus on the same goals and track success using the same measures, while identifying unique contributions to the initiative by each agency. In addition to adopting common measures among government agencies, agencies should work with non-governmental intermediaries on common measures of performance.

5. e-Government is Increasingly Focusing on the Citizen Again, but Not All e-Government Initiatives Are "Citizen-Centered"

In the past, agencies have approached interactions with the citizen from the perspective of the agency, answering for themselves the question, "What do citizens want from me?" The new focus needs to reflect a change in perspective, asking the citizen directly, "What do you need? How do you want it?" To implement a successful citizen-centric e-government initiative, a first step is to determine *what citizens really want*. Implementation of e-government offers an opportunity to carefully examine not only the way a process is technology enabled, but to validate whether the process remains the most appropriate in today's changed environment. It is the right time for an agency to determine "Are we doing the right things?"

Citizen/stakeholder input is critical to validate the goals and objectives of the agency in meeting their mission statement. Some agencies are defining new best practices with the creation of forums and mechanisms for securing buy-in, consensus, feedback and ongoing involvement of stakeholders and users. The most successful e-government initiatives have built stakeholder and user input functions directly into their operations, from concept through design and development and into operating procedures. However, not all agencies are fully in-tune with their customers and continue to craft e-government initiatives without fully determining true customer needs.

Recommendations:

Agencies Should Adopt Customer-Oriented Performance Measures Based on Clearly Identified Customer "Values"

In justifying and evaluating e-government initiatives, each agency should begin with a survey of its users on what values of service they desire. Value-based customer research has been used effectively by the private sector for decades, but rarely is used in government. By identifying a customer's values in relation to the product or service provided, agencies can glean keen insight into what key issues need to be improved to see an overall increase in customer satisfaction. Customer measures should be adopted that align directly to the identified customer values (timeliness, accessibility, usability, security, etc.) Moreover, feedback should be continually assessed to inform mid-course corrections. The Usability Center the Social Security Administration provides a model for how agencies can survey users. At the Center, users actually work with government teams to try new approaches and technologies.

OMB Should Provide Funding and Paperwork Reduction Act Clearance for Agency e-Government Client Surveys

One major barrier to citizen-centered tools such as customer surveys is the limited funding available. This has turned out to be penny wise and pound foolish, especially in light of the massive investment most e-government initiatives require. Another barrier cited by agencies that wanted to do an initial survey was the perception that surveys would not be approved under OMB's Paperwork Reduction Act process. Whether this is a real or perceived barrier, OMB should clarify its approach to pre-project client surveys to guide e-government initiatives.

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

Successful and appropriate collaboration between business or mission leadership and information technology leadership is an ongoing challenge both inside and outside of government. With the creation of the Chief Information Officer (CIO) position in the agencies, the Congress set the stage for progress on this issue. The introduction of new C-level players, creates a new dynamic in the agencies, with shifts in power and authority.

FY 2002 saw continued progress in developing a strong role for the CIO within each federal agency. At the most successful agencies, as we observed at the Departments of Labor, the Army and the Navy, the CIOs are now positioned to represent the transforming potential of technology in strategic discussions at the top levels of their organizations. These CIOs foster a healthy integration of technological capabilities into mission performance, recognizing that technology is an enabler, not a mission in itself. Indeed, the most successful CIOs are assuming the role of "enabler" within the agency leadership structure—working with mission program managers to ascertain needs and harnessing technology to assist in mission program delivery.

It is a pitfall for a CIO to focus on completing one IT project, without examining the entire business process. The lack of integration of some IT projects with back-office processes, or line program inability to deal with greater levels of speed and transparency brought by the completion of an e-government project, may create disappointment among constituents. For instance, the IRS now enables constituents to file tax returns online, but still takes months to confirm that the documents were filed correctly or provide reimbursement.

Despite the progress in positioning the CIO into an enabler of business processes, some agencies are still struggling to integrate the new CIO function into operations and to establish the desired working relationship between the CIO and other executives on the agency leadership team. Many interviewees reported the agency head has to establish the environment for successful integration and collaboration for progress to be made.

Recommendation:

Align CIO Office Structures to Agency Business Processes

It is critical that the CIO's office be closely aligned to and understand the business processes and desired outcomes in order to be able to support e-Government appropriately. As such, CIO offices might want to reorganize according to the business processes of the agency and be measured as a unit on the performance measures of the programs they serve. It would be useful for alignment to occur within the government-wide business processes identified by OMB. While IT staff should be recruited and trained on the basis of their technical expertise, they should be managed and focused on the business process they are enabling through technology. In this regard, organizational structure does matter.

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

Consistent with the role of CIO as "enabler," there needs to be leadership shown for e-government outside of the CIO's office by mission program managers in each agency. Indeed, in almost every successful e-government initiative studied by the research team, there is a top-level executive (outside the CIOs office) who gave his or her full backing to the project. Where the executive officers and mission program managers of the agency are engaged, they become part of the driving force that keeps the momentum of an initiative moving forward, clearing the way through internal strife and challenges, and achieving strategic objectives. The message is clear: the CIO can assist mission program managers achieve their desired program improvements...but mission program managers must lead the way and accept the assistance.

Recommendation:

Organize Agency Business Processes-Oriented Teams Comprised of IT and Program Staff

Reinforcing the recommendation made in the previous section, agencies may want to consider forming joint IT-program staff business process teams that would suggest, design and manage e-government initiatives for the agency.

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.

Historically, cross-agency collaboration has been a major obstacle to e-government progress. The e-government initiatives in the PMA demonstrate that cross-agency collaboration can occur when sufficient leadership and motivation is present. However, despite the collaborative success seen with PMA initiatives, cross-agency cooperation is still the exception, not the rule

Initiatives that cross boundaries have to address physical and procedural barriers, in the form of stove-piped systems and processes, as well as cultural challenges. Built semi-intentionally, these systems and processes now stand as a barrier to citizen-centered service, instead of a convenience reinforcing functional alignment and a desirable separation of functions. A by-product of the stove-piped structure is redundant,

and non-compatible systems, which waste taxpayer dollars, inhibit or prevent collaboration, and slow progress toward building an e-government. Executive leadership is especially critical, because these initiatives in almost all cases require teams to cross traditional boundaries: between agencies at the federal level, between the agency and its State and Local government counterparts, and between the agency and private industry.

The research team observed particularly strong interaction across federal agencies in the work of the federal government, exemplified by the General Services Administration as it leads the effort to implement e-authentication, and the Department of the Interior with their leadership role on Recreation.gov and Volunteer.gov. Excellent links with state and local counterparts were established by the Department of Education as they learned by visiting the State of Hawaii the impact of reporting requirements on a small state and local education system. Among several agencies that work productively with industry, the Department of Housing and Urban Development stands out for its practical creativity in collaborating with industry to equip the residents of multi-family housing units with internet technologies. Confirming the continued challenge of cross-agency collaboration is the HHS-led e-grants initiative, where grants programs government-wide continue to disagree on a common approach to providing one-stop citizen and partner access to grants.

Recommendations:

Improve Internal Agency Coordination

It is hard to expect federal agencies to coordinate with each other if they cannot first coordinate internally. The same issues of collaboration, integration and standardization are faced within federal agencies as various internal programs jockey to do "IT their way." Agencies may want to consider a model developed by the Department of the Navy, where the agency selected Functional Area Managers (FAMs) to oversee e-government initiatives.

Provide Cross-Agency Funding for Cross-Agency Initiatives

Everyone knows the golden rule in government budgeting: "He who has the gold, makes the rule." Barriers to cross-agency collaboration in e-government will continue until the funding for projects is centralized into the same budget item. OMB and Congress should recognize this reality and work to provide clear and targeted funding for cross-agency e-government initiatives. Indeed, cross-agency initiatives should receive special priority in relation to other IT investment opportunities.

Tackle the Issue of Privacy and Security in a Cross-Agency Context

Agencies continue to struggle with the increasingly important issues of information security and privacy of personal and proprietary data. Problems with inaccurate user authentication, inappropriate exchange of data across departments, security breaches, inadequate business continuity plans, lack of staff training, and insufficient balance and integration between different access channels abound. Privacy and security remain unresolved issues. It is accepted that a government site is excpected to be more secure than a private enterprise site and that the government will not violate a citizen's privacy. While the nature and threshold of privacy and security concerns may vary dramatically from agency to agency, government-wide approaches and standards for these issues could be developed to provide consistency in treatment and allow for improved inter-agency collaboration.

Expand OMB's Role in Government-Wide Standard Setting

OMB should take the lead and whenever possible set standards both from an IT perspective (data standards), as well as a from a business perspective (terminology definitions). There is a need for a common, published taxonomy across the government that is available to citizens and partners as well as for use within the agencies. To facilitate the successful completion of e-government initiatives, operational, terminology and design standards must exist across all agencies and departments. If scalable and flexible design is to be implemented all personnel involved must "be on the same page" and "speak the same language." Senate bill S.803 may relieve the frustration around the lack of uniform standards concerning organization, categorization of information and definitions, but the fundamentals must be in place to ensure an easy maturity transition as the initiatives grow and merge. Uniform standards will insure partner interoperability and remove hindrances to data sharing.

9. The Federal Enterprise Architecture (FEA) is Recognized as the Necessary but Missing Scaffolding for All Agency e-Government Initiatives

This FEA initiative, assigned to the Office of Management and Budget, is critical to ongoing success in e-government. Agencies made it clear in the interviews that they are making strides to develop their own enterprise architectures. All recognize, however, that they must frame their architectures within the context of the FEA. The need for architectural standardization and integration across the Federal government is better understood in the wake of September 11, as agencies grapple with security requirements and challenges.

Though architecture is recognized as necessary, there is still a long way to go to make it available and realize its unifying potential. The research team observed that architecture may be set to the side as agencies focus on more urgent if less important issues. Developing an enterprise architecture is a difficult process, and many agencies already feel overwhelmed with work. Keeping their resources focused on other pressing business, these agencies and organizations struggle to fully address the challenge of developing their own architecture and then integrating with the FEA.

Recommendation:

Use the Department of Homeland Security as a Pilot for the FEA

Besides encouraging OMB to continue its work and complete the FEA, OMB actually has a great opportunity for testing out federal enterprise architecture with the pending creation of the Department of Homeland Security. While stitching together the various agencies that will comprise the new Department will be a daunting task, the fact that it is complex and carries with it the myriad of architectural challenges faced by all federal CIOs makes it a perfect testing ground for implementation of FEA. In the meantime, agencies should continue to design and implement their own architecture.

10. Establishing Clear Priorities Pays Off in Generating Attention to and Sufficient Funding for Key e-Government Initiatives

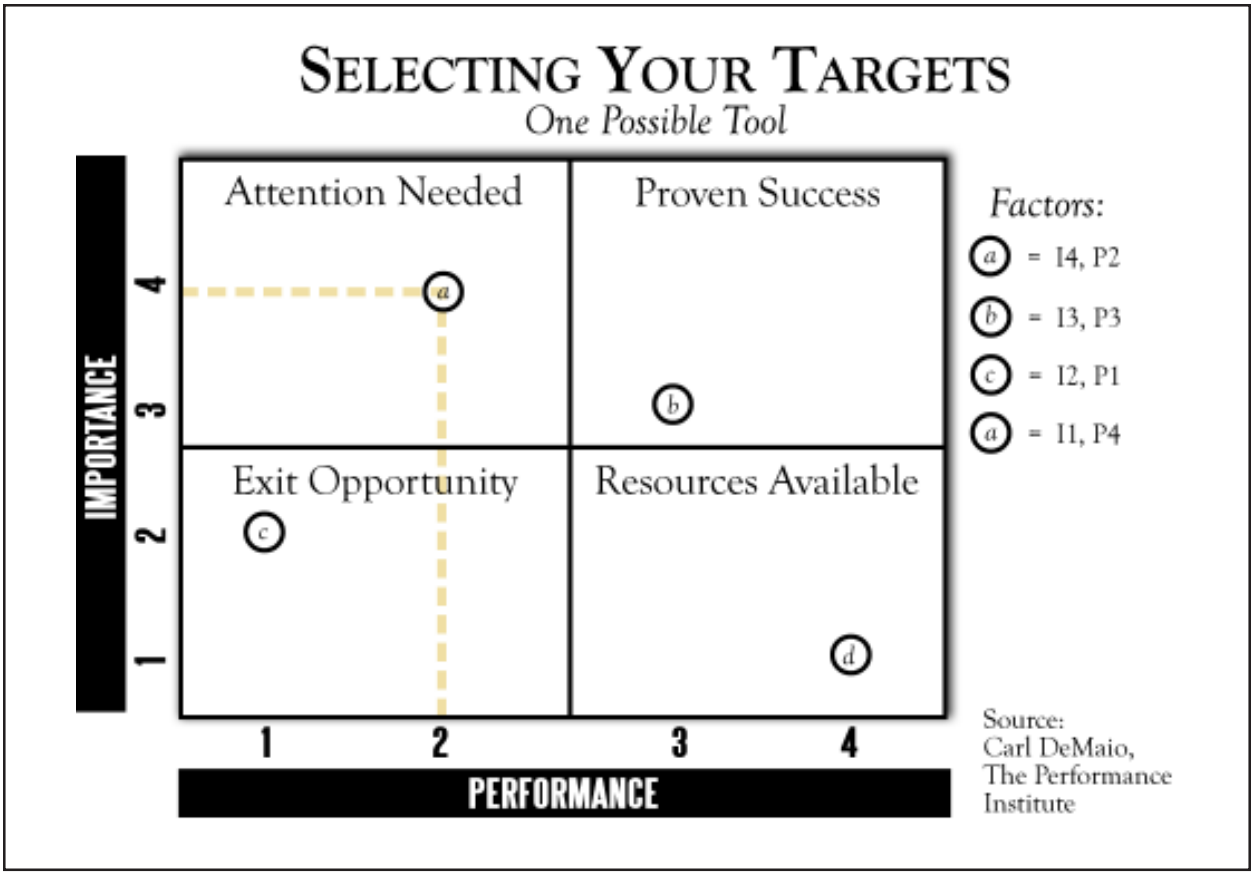
From the research team's government-wide survey, it was clear that agencies have many worthy initiatives under consideration. It is difficult to determine which merit funding support. It is not enough to presume that a good idea is good — there needs to be a method to measure the costs and impacts of new initiatives and make comparisons to other viable initiatives. With all of the opportunities presented by information technology, without some kind of prioritization and focus agencies run the risk of taking on more than they can handle.

The approach OMB took to the e-government goal of the PMA included setting clear priorities for attention, aggressive oversight, and full funding. That approach, by and large, has been validated by the progress most of the initiatives are making. OMB selected initiatives that would be high impact, involve as many agencies as possible, and feasible to complete in a short time span (18-24 months.) By focusing on a discrete few, OMB has been able to jumpstart initiatives—with several projects already demonstrating impressive results.

Recommendation:

Agencies Should Prioritize their e-Government Investments

In justifying and evaluating e-government initiatives, each agency should include analysis of the relative priority. Agencies should adopt a prioritization tool based on their IT Capital Plan and their mission priorities. Regardless of what tool they adopt, agencies should align the prioritization tool with project proposal, selection and measurement criteria. (Two ideas for prioritization tools follow.)



Agencies might want to use a prioritization tool for their e-government initiatives to assess program and business function performance. This tool assesses internal and external customers to determine how "important" a service is and how well the service is performanced. Additional measures of importance and performance can be devised outside of a standard survey, such as industry benchmarks, outcome indicators, etc.

Products and services would then be plotted on a unified graph, where one axis provided the "importance" evaluation and the other provided the "performance" evaluation. Based on which box the activity falls into, an agency can determine what priorities for e-government may exist.

A. **Attention Needed**—Activities plotted here are important to the agency's overall performance, but are not performing very well. These activities are prime candidates for top priority action designed to improve activity performance.
B. **Proven Success**—Activities plotted here are important to the agency's overall performance and are performing very well. They may not need to receive priority attention.
C. **Exit Opportunity**—Activities plotted here are not important to the agency's overall performance and are not performing very well. Here, there is reason to evaluate whether the agency should conduct this activity in the first place. If reason exists for the activity, because it is judged low importance, it may not be a top priority for e-government.
D. **Resources Available**—Activities plotted here are not important to the agency's overall performance but are performing very well. The agency may be over "resourcing" these activities based on its level of importance.

Potential Questions to Ask in Evaluating e-Government Priority Projects

1. Source of the Project: Did the project result from an executive, legislative, or judicial mandate?

2. Architecture Support: Does the project support a shared-services architecture?

3. Economics: Does the project generate savings or provide income? Does it provide a strong value-to-cost ratio?

4. Customers and Benefits: Are the customers internal or external? How does the project benefit customers?

5. Channel Impact: Does the project make lines shorter?

6. Accessibility: Does the project support accessibility initiatives such as Section 508?

7. Depth: Does the project support government transformation?

8. Political Return: Does the project help bridge the "digital divide?" Does it provide media exposure?

Although the tool can be modified to reflect different weightings, a consistent weighting scheme is necessary within an agency and across the federal government.

Source: Gartner Research Note, "Prioritizing e-Government Projects," Christopher Baum, February 5, 2002

Chapter 4
Show Me the Measures

"What gets measured, gets done." By now, virtually every federal manager has heard this famous quotation from renowned management guru Peter Drucker. The passage of the Government Performance and Results Act in 1993, the Clinger-Cohen Act in 1994, and the promulgation of the President's Management Agenda (PMA) in 2001 all provide federal program managers with a clear mandate to plan for, manage by, and justify budget requests through performance measures. The PMA clearly endorses both the Results Act and Clinger-Cohen and it articulates additional performance-based expectations of e-government.

As the research team visited each federal agency, it became clear that there are few examples of effective, mission-aligned IT performance measurement in government. Even the 25 priority e-government initiatives were struggling to define meaningful performance measurements. While the research team started each meeting with "Can you show us your measures?" the response often was "We don't have many good ones, can you show us yours?" (i.e. measures from other agencies). While it was heartening to see everyone understanding the importance of performance measures and wanting to adopt better measures, it was disappointing to uncover that now 7 years after the passage of the Clinger-Cohen Act, federal agencies still are not using effective, results-oriented measures of performance for many IT investments.

Of the measures collected by the research team, most were not truly mission-aligned. Agencies are using "proxy" measures in many cases, focusing on project management indicators tracking whether an e-government initiative is on time, consistent with specifications, and on budget. These measures, while important for internal project management, reveal little information on whether the e-government project is having an impact on agency program performance or cost efficiencies.

The Importance of Measuring "Mission Aligned" e-Government Performance

As noted, the research team generally found all agencies interested in improving their e-government performance measures. Understandably, agencies are seeking measures out of responsiveness to the Clinger-Cohen Act and the President's Management Agenda. Moreover, agency managers understand that OMB desires to manage by associating monetary resources and program results using performance

measures. As well, agency managers appreciate the need to be accountable for producing and evaluating results of their programs.

While accountability and compliance are important, there are other reasons why federal agencies should adopt mission-aligned e-government performance measures. Indeed, accountability and compliance are not the primary benefits of effective performance measurement—rather they are the byproduct. Instead, agencies should craft a comprehensive strategic management approach to e-government programs. Such an approach should provide four levels of capability for the agency, resulting in a multitude of benefits.

STRATEGIZE to Achieve Key Agency Outcomes

Performance measures should help tell the agency's "story" about why they are pursuing various initiatives. The challenge is that agencies must begin their stories at the end—with the end outcomes. Too often in the emerging world of e-government, initiatives are developed with general ideas about what the end product will be. The lack of specifics is deliberate, as the teams intend to learn through experience what is possible. In these open-ended projects, managers and executives debate and change the focus and desired outcome. This lack of a clear end-state dramatically increases the likelihood of failure.

E-government performance measures demonstrate how technology can assist or enable programs to improve their outcomes. This is a vitally important function that measures can serve, as they provide a clear mechanism to validate the assumptions behind agency IT investments. The mere availability of technology systems and online services does not translate into better service levels. Too often, agency's take an "if it worked there, it will work here" approach when deciding on an e-government initiative. The process of defining performance measures often motivates IT managers to state their assumptions in clear terms against a pre-established program goal. If a clear link cannot be established, the assumption might not be valid.

COMMUNICATE Priorities and Focus Attention on Results

Performance measures are powerful vehicles of communication. Hence, what gets measured, gets done. Performance measures can communicate internally and externally. The business case for an e-government initiative, clarified through performance measures, becomes a tool for communication and a roadmap to success, increasing the likelihood of a positive impact on performance of mission.

Once an initiative is decided, it is important to communicate in clear terms what is expected of project participants and what constitutes the project's common goal. These measures can focus the attention of internal agency managers. As for external audiences, performance measures offer a tool to meet rising public expectations and maintain e-government momentum.

MOTIVATE Internal Managers and External Partners to Integrate and Coordinate Under the e-Government Strategy

Good performance measures should motivate. In an internal setting, performance measures can be used to evaluate the effectiveness of individual managers or project teams leading e-government initiatives. By applying the same performance measures for the success of an e-government initiative to IT staff and program staff alike, agencies can use measures to assemble the various activities within an agency for

coordinated and integrated action. More importantly, performance measures can ensure that external parties (vendors, program partners, other federal agencies) are acting in a coordinated and integrated fashion. As groups with disparate missions and disparate funding pressures are pulled together, performance measures for an e-government initiative can provide the vital glue to keep all parties focused on the same goal.

MANAGE to Reduce Risk of Failure and Maximize Impact of e-Government Initiatives

Good performance measures provide timely, reliable, relevant and useful information across the entire lifespan of e-government initiatives. Performance measures should serve as "red flags" and "early warning signs" that an e-government initiative might not be having the desired impact. With effective performance feedback, agencies can take corrective action by adjusting the e-government project or terminating the initiative to avoid unproductive expenditures. Through its performance measures, agency managers should have the necessary information to make accurate financial and programmatic management decisions, maximize a return on investment, and document and build on success in the e-government initiative. Indeed, it is at the management phase of performance measurement that an agency can cycle back to strategize additional e-government initiatives and refine existing ones.

Defining Mission Aligned e-Government Performance Measures

Various methodologies have been devised and implemented inside and outside of government to measure the impact of e-government and e-commerce initiatives. It is important to recognize that in defining meaningful performance measures for e-government initiatives, there is no single approach or methodology that can or should be adopted government-wide. Measures are reflective of each agency's and each e-government initiative's profile.

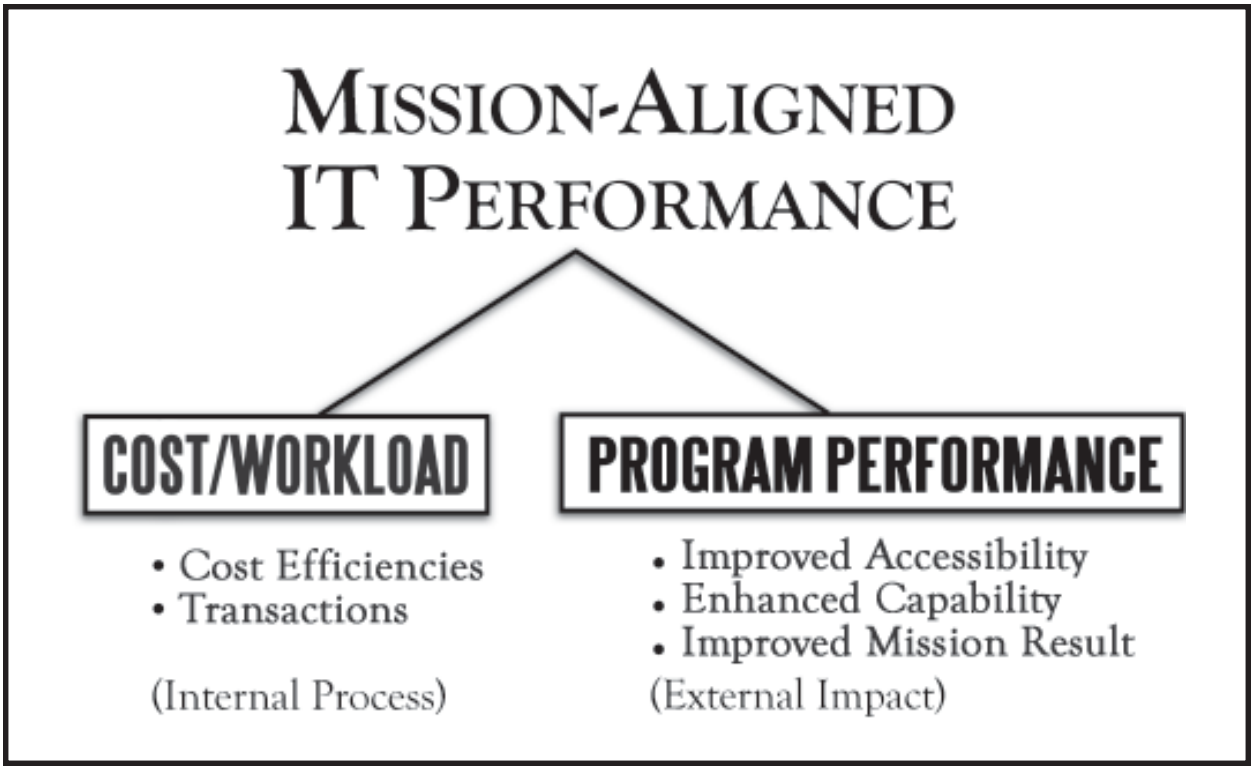
As a result, this project does not endorse any one methodology in particular. Rather, recognizing the reality that agencies will have multiple measurement methodologies to choose from, this report presents several "critical success factors" that agencies should keep in mind when defining mission-aligned e-government performance measures. Where possible, actual performance measures are provided as examples. However, agencies should NOT adopt the measures suggested in this report in a cookie-cutter fashion. Instead, agencies should define a limited, but balanced set of measures based on the unique profile of each specific e-government initiative.

The Two Dimensions of Mission-Aligned IT Performance Measures

In selecting performance measures, agencies should return to the definition of what constitutes a bona fide "citizen-centered e-government initiative:" ***Citizen-centered e-government initiatives strategically employ information technology to provide government products or services to intended users resulting in enhanced value.***

At their most basic level, mission-aligned performance measures are intended to clearly define "enhanced value." There are two primary dimensions to enhanced value: cost efficiencies and improved program performance.

Cost-efficiency performance measures focus internally on agency activities and processes, demonstrating how the e-government initiative has generated streamlined and efficient ways of producing agency products and services. The end user of those products and services does not perceive the difference, but because of improved internal efficiencies, the agency can use cost savings to provide more services or divert freed-up resources to other agency products and services. As a result, cost-efficiency measures constitute mission-aligned or citizen-centered measures by demonstrating enhanced value (more products and services) for the taxpayer's investment.



Improved program performance measures focus externally—examining the improved accessibility of products and services to users, evaluating the improved capacity or capability derived by users from products and services, and ultimately demonstrating improved results or outcomes. These e-government performance measures by their nature will align with measures of performance used by the programs of the agency under GPRA reporting requirements. The end user of technology-assisted products and services should perceive a real difference in this case as the e-government initiative enhances the impact of those products and services. As a result, improved program performance measures are mission-aligned or citizen-centered measures by demonstrating improved impact the agency program has on target constituencies.

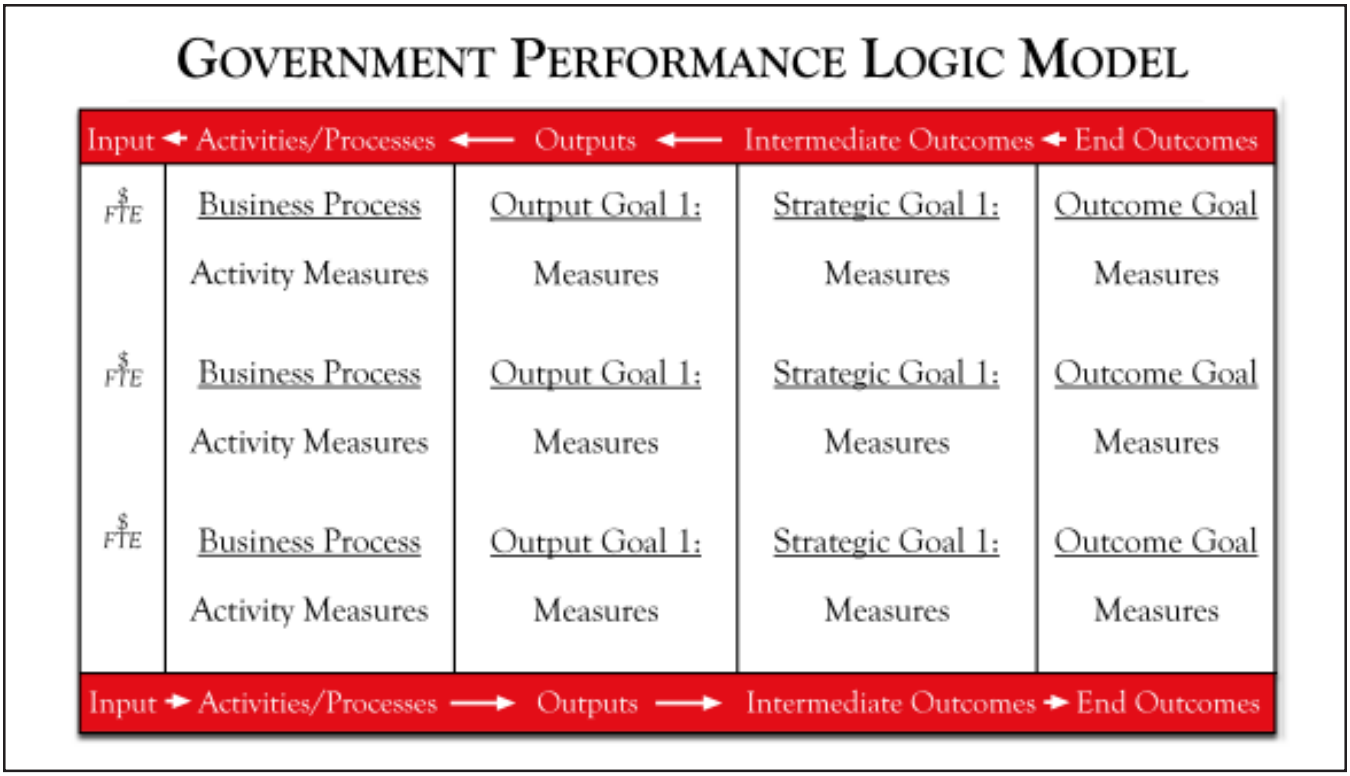
Aligning e-Government Initiatives to Cost Efficiency and Program Performance Goals

In selecting and refining their IT planning and measurement methodology, agency managers should choose an approach that allows alignment to both dimensions of the definition of citizen-centered e-government. Whatever approach is selected should demonstrate the "cause-effect" linkages between e-government initiatives and changes in internal and external performance.

While "cause-effect" relationships are difficult to measure, the agency must at least begin by articulating its strategic approach to fulfilling its mission—i.e. what agency products and services will be provided to achieve the end-outcome results defined by the agency's mission. Much of this thought process should occur in the context of an agency's GPRA long-term strategic plans and annual performance plans.

This leads to an important observation for measuring performance-oriented e-government initiatives. If the agency does not have a clear, strategic logic supporting its products and services based on a clearly articulated strategy for achieving its mission end outcomes, e-government initiatives cannot be associated with truly performance-based measures.

The Government Performance Logic Model is one tool that can illustrate the necessary elements and linkages between activities, products and services, strategies and end outcomes of an agency. By adopting a logic model approach in its IT planning and measurement methodology, an agency can identify ways to measure in a citizen-centered way cost efficiencies and improved program performance resulting from e-government initiatives.



The Logic Model has four primary planning and measurement elements.

End Outcomes:

The model begins with the end-state, defining what tangible results for the taxpayer are produced by the program. Indeed, outcome, goals and measures are the ultimate ways to define and track "success" of the program. End outcomes are rarely directly measured by e-government initiatives as they relate to the fundamental purpose of the program being assisted by information technology. However, questions a program manager might consider when defining outcome goals and measures include:

- How does the public benefit because of this program's mission?
- Why was the program created in the first place?
- What indicators would suggest that the program fully accomplished its goals?
- How will you know you have been so successful that you can shut your program down? (mission accomplishment)

Intermediate Outcomes:

Once end outcomes have been defined, then the agency can what strategies are needed to achieve the desired result. Strategies are perhaps the least understood element of planning, as they require an understanding of why outcomes are not yet achieved. They are problem and opportunity-oriented in nature, defining what impact an agency needs to have on an issue. While most intermediate outcomes are not measured directly by e-government initiatives but rather by the program being served, there are some *attributes of impact* that can and should be measured. These attributes relate primarily to the accessibility or user-friendly nature of agency products and services, the capabilities or capacities delivered to users, and the effectiveness of products and services in meeting the needs of users. In many respects, these attributes are derived from the user-surveys detailed in Chapter 3 of this report. Questions a program manager might consider when defining intermediate outcome goals and measures include:

- What must change in the status quo to create the conditions necessary for goal attainment?
- Who are the targets of change and what must they do? What attitudes, behaviors or conditions in the targets must be influenced?
- What causes the outcomes NOT to be achieved? What would remedy this situation?
- What "values" or needs do targets hold in relation to the anticipated products and services needed for strategies?

Outputs:

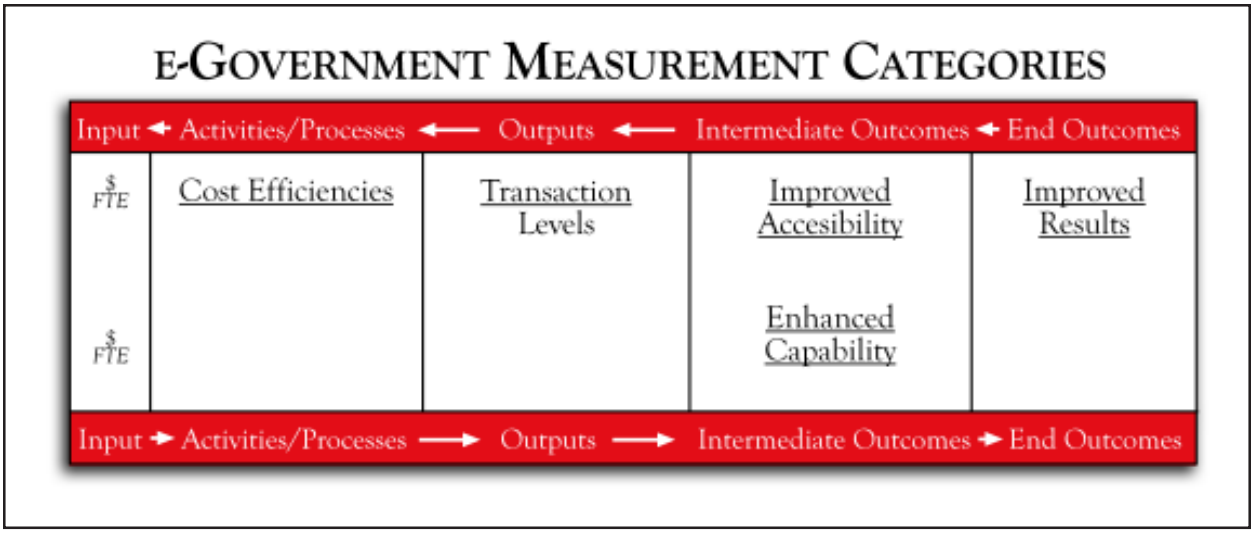
For each strategy, the agency provides products and services designed to cause the changes necessary to execute the strategy. In many cases, agency products and services are already well defined. As noted in Chapter 3, most agencies have opted to pursue e-government strategies that convert or supplement existing products and services from brick-and-mortar vehicles to electronic ones. Strategic management and, as a component, transformational e-government provide rethinking of products and services on the basis of desired strategic impact. In this case, e-government may replace old products or services, or supplement existing products and services. Whichever route is taken, output measures provide a fertile category for measuring e-government performance. Questions a program manager might consider when defining output goals and measures include:

- For each strategy, what specific things can this agency provide to influence the targets to change?
- What kinds of information, products and services would satisfy the needs of the targets of change?
- What are the actual workload or transaction levels that are to be handled? How can digital channels be created to deliver this workload?

Activities and Processes:

For each product and service provided, a business process (consisting of related activities) is defined. Business processes and component activities yield products and services. As noted in Chapter 3, most agencies have used e-government initiatives to automate or improve existing processes and activities without considering whether the product or service is an effective or required vehicle. Once an agency determines its products and services in a strategic manner, e-government can play a major role in redesigning agency processes. Business process measures provide excellent opportunities to define and measure cost efficiency performance through e-government initiatives. Questions a program manager might consider when defining business processes and activities:

- What key activities and tasks can be used to efficiency produce the product/service?
- What do employees actually DO in service of the output?
- What resources (information, infrastructure, etc.) are needed to support this business process?



As a result of analyzing an agency program served by information technology using a logic model approach, five possible categories of measures for e-government initiatives have emerged.

Measures of Improved Mission Results

Definition: An e-government initiative can use measures of improved mission results when a direct link is made between the application of information technology and an anticipated improvement in an end-outcome performance measure of the program served. The threshold for this determination is quite high and rare for most e-government initiatives. Nevertheless, even when a direct relationship cannot be established and measured, the end-outcome goal of the program should be used in the initiative's business case.

Evidence from Case Studies: As expected, the research team found very few examples of measures of Improved Mission Results in its survey of federal agencies. However, several of the case studies demonstrated that agencies are attempting to devise end-outcome measures in e-government. At the Department of Commerce, the Export.gov initiative hopes to measure a 10 percent increase in the number of companies doing business overseas and link that outcome to their initiative. While no quantitative measurements are being used, the Department of Housing and Urban Development reports that attendees of the Neighborhood Networks initiative are reporting decreased crime, increased individual earnings, and improved academic achievement from participation in the program. Other agencies suggested the kinds of outcome measures they are considering for their projects, but have yet to select final measures. For example, the Federal Emergency Management Agency is considering tracking reduced loss of life and property from its Disasterhelp.gov initiative. In measuring the impact of Recreation One-Stop, the Department of Interior is considering linking that e-government initiative directly to its Department-wide end outcome measures relating to improved access and quality of recreation experience provided on public lands.

Examples of Common e-Government Measures: Measures are defined on a program-specific basis making common e-government measures inappropriate in most cases.

Measures of Enhanced Capabilities

Definition: Measures of enhanced capabilities are used when it is anticipated that an e-government initiative will result in improved capacity of users to effect desired change. In other words, e-government provides new products and services not previously available that are more potent when employed by users. Similarly, existing products and services have an enhanced impact for users because of the application of technology. Like end-outcomes, demonstrating this link is difficult. Yet, such linkage is perhaps most meaningful in defining e-government's impact on and contributions to end-outcomes.

Evidence from Case Studies: As with the measures of Improved Mission Results, few case studies provided concrete measures of e-government contributions to enhanced capabilities. The Internal Revenue Service's EZ File e-government initiative offered some of the most impressive user capability measures studied. Here, the agency is linking this e-government initiative to the user capability of filing taxes in four hours per year or less. When this indicator is correlated to average US income, it is possible to demonstrate aggregate savings to the US economy from the initiative. Other agencies indicated they were in the process of defining measures for enhanced capabilities. In Disasterhelp.gov, FEMA is examining measures of timeliness of disaster information, with examination towards ensuring information, warnings and advisories are issued with sufficient time for targets to respond. FEMA also indicated interest in devising measures for reducing risk posed to first responders to disasters. Several e-government initiatives in the Dept. of Defense reported desire to link their initiative to force readiness, a key intermediate outcome measure used by the DoD.

Examples of Common e-Government Measures:

As desired capabilities for achieving end outcomes are driven by the special outcomes of each program, most e-government measures in this category will be program-specific. However, several kinds of measures could be used to assess improved capabilities:

- Use/Adoption Rate Among Targets (e.g. improved regulatory compliance by industry served by online compliance assistance program)
- Improved Capacity Among Targets (e.g. for job training program this could be measured by the acquisition of skills in classroom programs vs. online learning)
- Customer Satisfaction with Utility or Benefit of Product/Service (e.g. standard customer satisfaction survey compared to brick-and-mortar product/service)
- Accuracy of Service/Product Provision (e.g. reduction in inaccurate services/products provided, reduction in error rates compared across channels)

Measures of Improved Accessibility

The most common measure in the "impact" side of the logic model relates to the use of e-government to provide more accessible, user-friendly products and services. An abundance of standard measures exist for this element. Measuring improved accessibility is a legitimate (albeit weaker) measure of improved program performance. The desired capabilities cannot be enhanced if targets of change cannot access the agency's products and services.

Evidence from Case Studies: Many agencies reported using measures for Improved Accessibility. For example, IRS through EZ File is measuring the cycle time for citizen receipt of refund checks, as well as measures of reducing average fee and percent of Americans paying a fee to file taxes online. At the Social Security Administration, the agency is measuring the time it takes for clients to receive death certifications, attempting to cut the cycle time from 170 days to only five days.

Examples of Common e-Government Measures:

- Market Share (e.g. percent of target audience served/reached in aggregate and across channels)
- Cycle-Time-to-Client (e.g. response time on client request for service or product)
- Customer Satisfaction with Ease of Access and Use of Product/Service (e.g. standard customer satisfaction survey compared across channels)
- Service Availability (e.g. times of day when e-government channels are being used vs. other channels, demonstrating that additional customers can now access services previously not available during that time)
- Reduced Constituent Cost (e.g. user fees and costs per transaction)
- Depth of Online Service (e.g. percent and volume of services available electronically)
- Number of Entry Points (e.g. number and volume of services available through different online channels, intermediaries, etc.)
- Service Reliability (e.g. planned vs. unplanned downtime)
- Special Need Accessibility (e.g. Section 508 compliance)
- Service/Product Integration (e.g. reduction in steps to client for ultimate service/product consumption)
- Reduction in Security/Privacy Breaches (e.g. number of instances of inappropriate access of private information or breach of security standards)
- Client Loyalty (e.g. percent of returning users, number access points monthly per client)

Measures of Increased Transactions

Transaction measures relate to the increase in the volume and complexity of workload handled by e-government initiatives. Many e-government initiatives already have adopted transaction-oriented measures. These measures indicate that more outputs are being produced by the agency. However, such measures do not track the improved quality or impact of products and services.

Evidence from Case Studies: Most case studies provided some kind of Increased Transaction measure or indicated that they would soon adopt one. IRS' EZ File has established a performance measure to track the percentage of tax filers who electronically file. Most agencies reported they tracked website access across the board. The National Science Foundation tracks the increase in proposals received through its PRAMIS online proposal system, demonstrating an increase of 19 percent in FY 2002.

Examples of Common e-Government Measures:

- Channel Comparison Measures (e.g. number of completed transactions; web channel usage relative to other channels such as walk-in, phone or mail)
- Percentage of Aborted or Incomplete Transactions (e.g. abandoned or aborted applications for services compared across channels)
- Customer Traffic (e.g. web hits, downloaded forms, etc.)

Measures of Cost Efficiencies

Cost efficiency measures relate to a wide range of elements within an agency's business processes. While the ultimate measure of cost efficiency is improved cost-per-unit output provided, agencies can and have used a variety of "cost driver" measures at the business process and activity levels to demonstrate how e-government initiatives are having an impact on agency operations. As with transaction measures, cost efficiency measures are increasingly being used by e-government initiatives.

Evidence from Case Studies: Several initiatives shared cost efficiency indicators. IRS EZ File measures cost-per-filing processed. At the Department of the Navy, the agency measured "cost avoidance" achievements, demonstrating an $18 million savings from its Medical Appointments internal e-government project. At the National Science Foundation, while proposals received increased 19 percent, handling costs decreased by 33 percent with the introduction of the PRAMIS system. The Department of Veterans Affairs measures disruption to business operations from the failure of key information infrastructure, examining the percent of time systems are available. At the Department of State, an even more fundamental measure has been adopted to track what percent of employees have access to the Internet.

Examples of Common e-Government Measures:

- Cost-Per-Unit-Output (comparison of costs for each channel, or even decline in aggregate costs)
- Cost-Per-Unit-Activity (comparison, decline, or elimination of costs for specific activities within an existing business process impacted by e-government)
- Average Transaction Processing Time Internally (e.g. start time vs. complete time; cycle time on applications or milestones of decision points)
- Transactions-Per-Employee (e.g. number of transactions compared to number of staff)
- Decrease in Management Layers (e.g. number of decision points within a process)
- Prevention of Business Disruptions (e.g. percent of time that key infrastructure and information assets are available to agency employees)

Appendix A:
Agency Reviews

Much of the information gathered and analyzed for this research project was derived from meetings that the research team arranged with agency chief information officers and other agency representatives who are knowledgeable about e-government (e-gov) initiatives. This information is presented in the reviews contained within this appendix.

The meetings produced information and insights on 29 e-government initiatives, programs, and offices. The research team used the same agenda and the same questions at each meeting. However, the team learned that each of the initiatives it studied bore differences, sometimes significant, in agency objectives, programs, leadership styles, and degrees of success achieved in implementing e-government initiatives.

The reviews presented here conform generally to a common format. First, the agency's identity and mission are highlighted. Next, the e-gov initiative, target clientele and function are named. Following this, a narrative description capturing essential data concerning the initiative is provided. Success factors – those e-gov attributes that meeting participants found to be reflective of good practices experienced in designing and developing initiatives – are presented. Last, in the majority of initiatives reviewed, the research team found that meeting participants were willing to share challenges confronted and lessons learned, and these are recorded as part of the narrative reviews.

Questions Used By Research Team in Agency Interviews

Stakeholder Input:

1. What method of collection did the agency use to gather and report stakeholder input?
2. How, specifically, was that input integrated into the program strategy, technology and program management, and what were the results?

Justification/Capital Planning:

1. What type of Capital Plan or business case was developed and submitted for this program?
2. How did the justification of the project align to specific program goals?
3. Were measures for cost savings and/or improved program performance articulated at the outset?

Program Management:

1. What methods and systems were used to manage the IT project?
2. What specific project metrics (note: not the same as mission-oriented performance measures) were used to track the management of the IT project?

Partnership/Acquisition Strategy:

1. What types of partnerships were created in order to design and implement the program/initiative?
2. What specific agreements, performance measures, oversight, and management controls were implemented to ensure effective contract and partner relationships were maintained?

Alternatives/Risk Analysis:

1. What risk analysis was conducted (both financial and programmatic) during the development and implementation of this initiative?
2. How did the conduct of risk analysis impact the design or implementation of the project?

Enterprise Architecture:

1. Was the initiative developed specifically to integrate with the existing agency and federal enterprise architecture?
2. What measures were used to ensure that the program did indeed integrate seamlessly?

IT Privacy/Security:

1. Were privacy and security strategy integrated with overall program strategy and management? How?
2. What specific concerns and challenges were identified, and how were they managed?

Case Study 1

U.S. Agency for International Development

Mission:

Support long-term and equitable economic growth and advance U.S. foreign policy objectives by supporting: economic growth, agricultural and trade; global health; and, democracy, conflict prevention and humanitarian assistance.

e-Gov Initiative:

Nonspecific

Clientele:

Nonspecific

Function:

Internal Efficiencies and Financial Management

Description:

Each year, the U.S. Agency for International Development oversees some $6 billion in U.S. foreign economic and humanitarian assistance programs. Among the IT challenges the agency faces is a very decentralized structure, with agents and offices situated all over the world, some in remote locations. Operationally, the agency continues to recover from the 1999 decision to abandon its New Management System.

The agency has implemented a series of "quick hit" initiatives," small-scale IT initiatives aimed at restoring confidence and developing skills, experience and rates of success. Building upon that, USAID has implemented a new financial accounting system, Phoenix, bringing it online at its Washington, DC headquarters in December 2001.

The agency has had great success thus far in reducing errors and converting data from its legacy systems. The agency now is preparing to enable its overseas bureaus to enter data into the system – a difficult task, in part, because of diverse locations and variability in technology infrastructure, such as reliable telecommunications, in those locations.

Success Factors:

Building Momentum – Through the small-scale IT quick hit initiatives, USAID restored a level of confidence and morale among the agency managers and staff, particularly the IT staff. Building upon these successes, agency managers implemented the Phoenix financial accounting system. Relying primarily on off-the-shelf software and applications, the managers developed a robust system that will serve as the cornerstone of the agency's IT and financial management strategy. The system will be capable of supporting other agency functions as well, such as e-procurement, human resources applications, etc.

Integrating Business and Technology – The USAID CIO has a dual role of financial and technological leadership, enabling the two functions to integrate more easily. Additionally, USAID has established a Business Transformation Executive Committee – BTEC - to act as a capital investment review board. This board has been instrumental aligning the office directors, directing programs, and driving system implementations. This board ensures that there is appropriate IT response to and support of the needs of both the internal stakeholders and the missions abroad.

In addition, USAID developed a Transformation Board of Directors to oversee and direct programs in process. The Board comprises a wide distribution of USAID representatives, thus ensuring that IT and financial programs respond to and support the needs of the diverse groups of customers and stakeholders.

In developing programs and implementing IT initiatives, USAID is examining and utilizing best practices in IT management as these are revealed by other federal government agencies.

Ongoing Challenges and Lessons Learned:

One of the most important lessons learned by USAID is that buy-in at the top levels of leadership is absolutely critical to the success of the IT initiative. The agency cites absence of appropriately close working relationships between program managers and agency leadership as one of the reasons for the compromise of the New Management System.

Equally important is putting together a management team able to lead a program, communicate effectively both up and down the command chains, and remain dedicated to achieving the vision set forth in the program goals.

Another of the lessons learned is that increased degree of success that can be realized in adopting commercial software and applications as cornerstone components of a major system.

Finally, USAID now endorses effective risk analysis and the creation of backup plans and strategies as an integral part of all IT initiatives at USAID.

Case Study 2
Department of Agriculture

Mission:

Enhance the quality of life for the American people by supporting production of agriculture: ensuring safe, affordable, nutritious, and accessible food supply; caring for agricultural, forest, and range lands; supporting sound development of rural communities; providing economic opportunities for farm and rural residents; expanding global markets for agricultural and forest products and services; and working to reduce hunger in America and throughout the world.

e-Gov Initiative:

GovBenefits

Clientele:

Government to Citizen, enabling citizens to research and apply for benefits directly through the Internet

Function:

Benefits Management

Description:

"GovBenefits is a partnership among many Federal agencies and organizations subscribing to a shared vision: *to provide improved, personalized access to government assistance programs.*"

GovBenefits, lead by the Department of Labor, is one of the 24 cross-agency e-Gov initiatives. It is an innovative one-stop website where citizens are able to establish the government benefits for which they may be eligible and to obtain assistance in applying for those benefits. Eleven agencies presently partner on the site, providing content and service through a single point of entry, allowing citizens access to information on 110 cross-cutting government benefit programs.

The site is expanding continually, aiming to eventually provide information for all government assistance programs.

USDA is one of the GovBenefits partnering agencies that contribute content, support and linked services through the GovBenefits portal. USDA is responsible for deciding what of its content will be included on the GovBenefits site and providing that data for use in a timely, efficient manner.

Success Factors:

Strong leadership and project management by the managing partner, the Department of Labor, has succeeded in keeping multiple disparate groups and partnering agencies actively engaged. As well, this leadership successfully has supported a regular flow of new content to the site and has maintained an effective portal capability.

A significant performance measure for the USDA is the timely submittal of web content and service information.

Ongoing Challenges and Lessons Learned:

USDA recognizes the requirement for a greater degree of consistency in appearance among data sources and web pages. There are eleven partners, and often the data and content that are provided convey a very different look and feel, reflecting the many unique sources of the information and services.

USDA recognized that their own initiatives need attention and focus. Over the last year USDA managers have formalized their internal business case development process. They began by conducting an enterprise-wide strategic and tactical planning effort. By bringing together program, technical and budget staff they developed business cases for a portfolio of twelve initiatives that address different types of opportunities, all of which support the USDA mission. This planning process allowed them to address risks, performance measures, cost and benefits to the project, prior to consideration for implementation. The USDA believes that this business case focus will promote more aggressive progress in achieving e-Government success.

Case Study 3
Department of the Army

Mission:

Defend the U.S. and its territories; supporting national policies and objectives; and defeat nations responsible for aggression that endangers the peace and security of the U.S.

e-Gov Initiative:

Army Knowledge Management

Clientele:

Government to Government, Government to Business and Government to Citizen, focusing on improving processes and communications with Service members, constituents, stakeholders, suppliers, and partners through innovative application of technology.

Function:

Internal Efficiencies, Information Distribution, Procurement/Acquisition

Description:

As part of an extensive transformation process to create a lighter, more agile, responsive and lethal force, the Department of the Army is building a network-centric knowledge-based force. The transformed Army, known as "Objective Force" will achieve decision dominance and battlefield superiority largely through improved decision-making from universal access to knowledge and employing new technologies. The Army Knowledge Management (AKM) strategy fundamentally changes how the Army gathers, manages and deploys information and information resources throughout the entire organization.

AKM is the 'process' part of the Army's transformation. It includes many initiatives focused on enterprise operations and is the umbrella for the Army's e-business efforts. AKM also emphasizes improving processes and information access for Service members, constituents, stakeholders, suppliers, and partners through the innovative application of technology.

There are five AKM Strategic Goals, and each goal has a champion at the Headquarters, Department of the Army level within the Army CIO/G-6 office and at each MACOM. Functional component leaders also are engaged in executing the AKM goals.

1. Adopt governance and cultural changes to become a knowledge-based organization. In Oct 2001, the Army Secretary and Chief of Staff gave the CIO responsibility for control of all $5B of Army IT expenditures. IT spending is managed and prioritized through a Resource Review Board under the CIO's control and reporting to the CIO Executive Board (comprised of about 40 voting members at the General Officer level from Army functional communities and MACOMs). Chaired by the Army CIO, this board meets quarterly and has subordinate working groups to staff issues and make recommendations to the Board.

2. Integrate knowledge management concepts and best business practices into Army processes to improve performance, using the Army Business Initiative Council (BIC) and the DoD BIC to disseminate and integrate best practices across the Army and DoD. Knowledge-sharing processes, such as Communities of Practice, are incorporated into Army operations and the CIO and functional communities work together to streamline and IT-enable processes and identify end-to-end process opportunities.

3. Manage the infrastructure as an enterprise to enhance capabilities and efficiencies. On October 1, 2002, the Army created a Network Enterprise Technology Command (NETCOM) as the single operational and management authority for the entire Army infostructure. The development of the Army Knowledge Enterprise Architecture provides the overarching framework that links enterprise processes with the innovative technology to support enhanced operations. Goal 3 supports the 'network-centric' piece of AKM. Server reduction of 30% is a specific objective for FY 03.

4. Scale the Army Knowledge Online (AKO) portal as the enterprise portal for universal secure access. AKO currently serves about 1.2 million users (Active Duty, Reserve, Army National Guard, and Civilians), providing universal web mail, single sign-on for embedded applications and access to organized content through the Army Knowledge Center. AKO is the platform for Army e-business operations and incorporates many self-service functions, including military personnel management readiness. A 40% reduction in legacy applications (by using AKO) by FY 04 is a specific objective.

5. Harness human capital. The Army needs to re-skill itself to achieve all of these goals. Several IT-related career categories were combined into an IT-specific category to better manage and develop the critical IT workforce that provides the technical support to the transformed Army. AKM courses emphasize the importance of the continuous learning process to achieving this new AKM culture. On-line courses available through AKO provide universal access to technology and professional development programs.

Critical Success Factors:

Unlike the other Services, the Army CIO has policy *and* budgetary authority for IT, and supports both the Army Secretary and the Chief of Staff. This authority and integration of technology with business processes lends itself to increased levels of success in developing and implementing IT initiatives.

Executive sponsorship - The Army Secretary and Chief of Staff strongly support AKM by personally signing all AKM guidance documents by enthusiastically endorsing in all leadership forums This type of top cover has paved the way for successful implementation of the AKM program.

Communication - The Army has consciously briefed anyone and everyone they can about AKM - especially their functional user community. The Army CIO has set up a division to be the liaison to the Personnel, Logistics, Medical, and Financial communities to ensure they have what they need to support the AKM program.

Budget Authority Alignment – Innovation paves the way. The Army CIO, with both policy and budget authority, reports to The Secretary of the Army, but also has IT operational responsibilities for the Chief of Staff. Pulling in all IT budget under the CIO's control gives the Army the clout to have everyone conform to policy.

Governance - The Army BIC and CIO Executive Board are examples of a strong governance model. Despite being so large an organization, the Army is able to quickly elevate best practices and budgeting decisions to the highest levels of Army leadership. Smaller organizations can learn much on how to govern their IT functions.

Innovative Leadership – One of the Army's proposals is the establishment of an AKM Innovation Office to develop 'proofs of concept' that leverage best practices, and incorporate knowledge processes and e-business concepts to achieve innovative solutions. As part of this office, the Army plans to create a Knowledge Process Reengineering team to assist Army organizations in achieving AKM goals.

Ongoing Challenges and Lessons Learned:

The greatest challenge currently is the lack of an IT baseline. Managers are working on many ways of improving IT and programs to develop and track metrics, but there is no established baseline for IT expenditures. Without a baseline, the Army doesn't know definitively where they are doing well and where they need to focus their immediate attention. Documentation of applications for Y2K is a start, but that inventory is quite dated. Several efforts are ongoing to establish the proper metrics, baselines, and business cases that will demonstrate documented success of AKM programs. These include business case analysis for server consolidation, Army Enterprise Resource Planning (ERP) integration, and implementing key enterprise processes such as an Enterprise Configuration Management program.

The culture change to operate as a 'network-centric, knowledge-based force' continues to be a challenge at all levels, but the active support of the senior Army leadership is helping to drive this change from the top. Development of IT-enabled functional and end-to end enterprise processes will also ease the culture change as daily routine business becomes accessible through AKO.

Case Study 4

Department of Commerce

Mission:

The Department of Commerce promotes job creation, economic growth, sustainable development, and improved living standards for all Americans, by working in partnership with business, universities, communities, and workers to:

1. Build for the future and promote U.S. competitiveness in the global marketplace, by strengthening and safeguarding the nation's economic infrastructure;
2. Keep America competitive with cutting-edge science and technology and an unrivaled information base; and,
3. Provide effective management and stewardship of our nation's resources and assets to ensure sustainable economic opportunities.

e-Gov Initiative:

Nonspecific

Clientele:

Government to Business, providing information and services to Americans around the country in order to support and foster economic development and strength.

Function:

Nonspecific

Description:

The U.S. Department of Commerce is developing a host of e-Government initiatives to support its overall mission and to "confront the intersection of trade promotion, civilian technology, economic development, sustainable development, and economic analysis."

Success Factors:

Implementing a Review Board for IT strategy and initiatives which includes senior executives including the Deputy Secretary, the Chief Financial Officer and the Chief Information Officer, the Department of Commerce ensures that top level leadership is engaged in the decision process to invest in and develop IT initiatives.

In order for an initiative to be examined by the Review Board, it must be presented in a detailed business case, outlining timelines, risk assessments, defined end states, and expected program performance. The initiatives that get to the Review Board have been carefully planned, and those which are approved for development are likely to be well-built and implemented.

IT management is integrated effectively with the business processes within the Department of Commerce. Information technology is viewed as a support function and is appreciated as a catalyst for change in the business culture.

The Department is undergoing a transformation - moving Bureaus to performance based management, using the CMM (Capability Maturity Model) approach, adapted to the Capital Investment Management Process. In addition, IT managers are utilizing OMB exhibit 300's now to develop each IT initiative as a Business Case and to capture far better information and program data that can be used for program enhancement and future initiatives.

Ongoing Challenges and Lessons Learned:

Department IT managers are developing the long range discipline and vision to handle the entire process more effectively.

A shortage of resources has been a constant challenge for the Department as it has tried to develop an IT investment portfolio and develop e-Government initiatives into successful programs.

IT security is a top priority for IT Department Managers. They are working to establish and maintain an effective IT security awareness and process. All 40,000 personnel have been through IT security awareness training to protect the integrity of data and systems, and the efforts are ongoing.

Currently the majority of Department of Commerce websites are informational only. As they move to transaction based applications, however, such as patent processing, information sharing, etc. they plan to use PKI and other forms of IT security.

IT managers and leadership continue to work to develop and agree upon sets of performance measures, both for their overall IT strategy, and for their agencies and initiatives. Presently, managers are working to develop measures at the program level based on the President's Management Agenda (PMA) and its criteria.

Working to establish baseline data for specific initiatives, the Department will use data from the current census when appropriate, and base their program performance goals on that data. Export.gov (in operation in November '02 for International Trade), for example, will use as a baseline current census data with a goal to increase by 10% the number of companies doing business overseas.

Realizing that access to the website may not be the only valuable performance metric, IT managers plan on developing a survey of end users to determine value and the role of IT in the big picture of providing agency benefits.

Case Study 5

Department of Defense

Mission:

Provide the military forces needed to deter war and protect the security of the United States.

e-Gov Initiative:

Non-specific

Clientele:

The Department of Defense focuses almost exclusively on internal applications with IT applications and programs. The mission and focus of the Department overall is to provide security. As such, the IT applications are developed primarily to support a wide variety of internal procedures and strategies and were not appropriate for this analysis.

Function:

Internal Efficiencies

Description:

DoD did not submit an e-Government initiative for consideration. However, DoD uses, develops, and produces a large number of technologies and technology applications that are adopted by civilians and civilian agencies. Examples include laser technologies, self serve gas pump payment technologies, certain IT software, MRI systems used in healthcare, and geographical positioning systems, all of which had origins in the Department of Defense.

Case Study 6

Department of Education

Mission:

Strengthen the Federal commitment to assuring access to equal educational opportunity for every individual. Supplement and complement the efforts of states, the local school systems and other instrumentalities of the states, the private sector, public and private nonprofit educational research institutions, community-based organizations, parents, and students to improve the quality of education. Encourage the increased involvement of the public, parents, and students in Federal education programs. Promote improvements in the quality and usefulness of education through Federally supported research, evaluation, and sharing of information. Improve the coordination of Federal education programs. Improve the management of Federal education activities. Increase the accountability of Federal education programs to the President, the Congress, and the public.

e-Gov Initiative:

Performance-Based Data Management Initiative

Clientele:

Government to Government, working with state and local schools and school districts to streamline data reporting burdens and costs

Function:

Information Distribution

Description:

As a meeting participant observed: "this is a serious effort to provide more value for the taxpayer's dollars in these activities. We aim to establish a more efficient data collection and dissemination system, one that provides timely and more useful information to those who work every day to improve student achievement."

The Performance-Based Management Initiative would consolidate Education's many data collections—some of which still involve manual processes—and replace them with a centralized, consolidated, electronic system. The initiative will reduce dramatically the reporting burden on elementary and secondary schools, while gathering much better data about program effectiveness.

By compiling and providing relevant timely information, the initiative enables Congress and OMB not only to track program performance, but to make better financial and management decisions, allocating valuable resources and attention more effectively and efficiently.

Success Factors:

Best Practices – Education took advantage of many strategies to achieve success with this initiative, and chief among those strategies was that utilization and replication of successful best practices from other smaller-scale programs such as the one in the state of Hawaii. Education adapted an already successful program instead of trying to re-invent an initiative that already existed.

Stakeholder Input – Recognizing that education is a very locally driven issue, Education has been very successful in maintaining on-going communication with stakeholders and integrating feedback as the program developed. Working with stakeholders also helped Education develop a good set of standards and common sets of data that would promote consistent information gathering and provide relevant timely data for analytic and decision-making purposes.

Education developed an effective collaboration and partnership with the states to combine efforts and maximize the results of both federal and state efforts to gather and assess performance data.

Integration – By developing a good business case, Education integrated architecture, technology, security, and thorough risk assessment into the entire program.

Leadership - Education chose leaders and managers based on their knowledge of the issues, rather than their knowledge of the technology and governmental process, to manage the program and achieve a clear and focused result.

Ongoing Challenges and Lessons Learned:

According to the CIO, an important lesson learned was the power of assembling stakeholders early and identifying current and future challenges and issues to anticipate and mitigate inevitable conflicts and difficulties as soon as possible.

Case Study 7
Department of Energy

Mission:

Enhance national security. Accomplish this through four principle program lines.

1. Through the National Defense Programs: ensure the integrity and safety of the country's nuclear weapons; promote international nuclear safety; advance nuclear non-proliferation; and, continue to provide safe, efficient, and effective nuclear power plants for the United States Navy.

2. Through the energy program: increase domestic energy production; revolutionize the approach to energy conservation and efficiency; and, promote the development of renewable and alternative energy sources.

.

3. Through the environmental program: ensure that safety legacies of the cold war are addressed and resolved in a manner that does not impede future national security missions; and, permanently and safely dispose of the nation's radioactive wastes.

4. Through the science program: sponsor cutting-edge science and technology research and development that revolutionizes how DOE finds, produces and delivers energy.

e-Gov Initiative:

Non-specific

Clientele:

DOE representatives discussed e-Government in the context of service to all three citizen groups, Government to Citizen, Government to Business, and Government to Government.

Function:
Non-specific

Description:
DOE representatives acknowledged that the Department had been "behind the curve" in developing and implementing e-Government to streamline and re-design business processes. However, DOE recently named a new CIO and with that has come an invigorated focus on e-Government. The CIO's team aligned its IT strategy closely with the President's Management Agenda (PMA), resulting in a quick jumpstart for e-Government IT initiatives.

Working closely with OMB to ensure adoption of best practice methodology, DOE established an internal task force to surface IT initiatives that would best serve the Department in its mission and its role in supporting the PMA. The task force compiled a list of over 300 potential initiatives. Nineteen of the initiatives were selected and DOE has started implementing an ambitious e-Government strategy.

Success Factors:
Governance — DOE created a management council to assess and review IT strategy and initiatives to ensure early executive buy-in and support. As well, the CIO and CFO forged a good working relationship that supported the achievement of success in integrating business processes with technology.

Communication – The management council implemented a communication plan providing the cornerstone for the change management necessary to support the e-government transformation. The goal of the plan is to inform and educate business leaders in the Department and to solicit their assistance in implementing the new systems and processes.

Best practices — working closely with OMB, DOE adopted proven IT management methodologies that align with the overarching goals of the President's Management Agenda.

Additionally, IT managers are working to develop the enterprise architecture in alignment with the Federal Enterprise Architecture, including security and risk assessments, further ensuring that Department strategy and initiatives are successful in achieving overarching e-Government goals.

Momentum — Using a series of quick hits to build momentum, IT managers plan on rolling out initiatives in a phased approach, to achieve successes and performance goals, and to get and maintain buy-in at all levels.

Cost efficiencies – IT managers are working to develop performance indicators to show cost savings, allowing each business area to re-apply saved resources to their own initiatives.

Performance measures – Managers are working with lines of business to develop effective performance measures and to establish the appropriate baseline data.

Ongoing Challenges and Lessons Learned:
One particular challenge was implementing a capital planning process relevant to new reporting requirements. The new process has supported the FY'04 planning effort and is working well.

IT managers are working to create successful levels of standardization and common operating environments across the Department and agencies to achieve integration of previously stove-piped applications and development processes. Similarly, managers are working to tackle the problem of integrating data from existing legacy systems into new program and information management.

Case Study 8

Department of Housing and Urban Development/ Government National Mortgage Association

Mission:

A decent, safe, and sanitary home and suitable living environment for every American.

- Creating opportunities for homeownership
- Providing housing assistance for low-income persons
- Working to create, rehabilitate and maintain the nation's affordable housing
- Enforcing the nation's fair housing laws
- Helping the homeless
- Spurring economic growth in distressed neighborhoods
- Helping local communities meet their development needs

e-Gov Initiative:

Your Path To Home Ownership

Clientele:

Government to Citizen, offering individuals a web-based educational tool and resource regarding home buying and homeownership.

Function:

Information Distribution

Description:

Working to "de-mystify" the entire home-buying process, Ginnie Mae created the innovative initiative, "Your Path to Home Ownership" program, a web-based educational tool for promoting information about home ownership. The website provides a range of services including worksheets for determining readiness to buy, an affordability calculator, a glossary of terms, information on mortgage selection, choosing an agent, finding a house, negotiating prices, filing for loans, and closing the deal. Updated regularly with geographic, economic and other relevant information, the site positions itself as an "honest broker of information," and offers a comprehensive resource for potential homebuyers. In addition, Ginnie Mae conducts extensive public outreach to make the website and the information widely available, particularly to communities that may not have proportionate numbers of Internet users or access to online information.

Success Factors:

The Ginnie Mae "Your Path to Home Ownership" program has dedicated and capable project and program management, as well as the full buy-in and support of the organization leadership – both critical aspects of the success of the program. The high levels of personal involvement and investment have helped ensure the successful outcomes of the program thus far.

There is a tremendous amount of ongoing stakeholder and customer involvement built into the program as well. Conducting focus groups and user analysis during its early developmental phases, and constantly evaluating user feedback to develop the more advanced features of the website and the program, Ginnie Mae has maintained open lines of communication with its stakeholders and incorporated their feedback in order to maintain a strong citizen-centered focus.

Additionally, Ginnie Mae utilizes "real-life" citizen interaction as a means of risk analysis and mitigation, evaluating the performance of the program and the evaluation of the customers.

Ginnie Mae has a very focused mission, and the Your Path to Home Ownership program is developed to align with and support that mission, ensuring that resources dedicated to the continued success of the program will be directly linked to the continued success of the organization overall.

The program and the website are constantly updated to contain timely relevant information, whether it be geographic, financial or demographic, allowing users to rely on the site and the agency for reliable sources of accurate information and resources.

Ongoing Challenges and Lessons Learned:

Start small, think big and build around your success has been an underlying mantra and has proven effective as demonstrated by this initiative.

Case Study 9

Department of Housing and Urban Development

Mission:

A decent, safe, and sanitary home and suitable living environment for every American.

- Creating opportunities for homeownership
- Providing housing assistance for low-income persons
- Working to create, rehabilitate and maintain the nation's affordable housing
- Enforcing the nation's fair housing laws
- Helping the homeless
- Spurring economic growth in distressed neighborhoods
- Helping local communities meet their development needs

e-Gov Initiative:

Neighborhood Networks

Clientele:

Government to Citizen, working to improve computer access, advance literacy, and create employment opportunities for economically and socially disadvantaged citizens.

Function:

Direct Service/Product Delivery

Description:

Created by HUD in 1995, Neighborhood Networks was one of the first federal programs to help provide computer access to low and moderate income residents living in HUD multi-family, assisted and/or insured housing.

With support from innovative public-private partnerships, Neighborhood Networks centers sponsor a range of services and programs, including job training and placement, educational opportunities, health care information and transportation.

Success Factors:

Home Grown – Neighborhood Networks is a "home-grown" initiative with strong executive sponsorship, enabling the program to develop at a natural pace and build upon initial success, growing from a small idea into a large-scaled initiative which continues to expand.

Partnerships – The Department of Housing and Urban Development's Neighborhood Networks program utilizes creative and well-developed partnerships among government, businesses, hospitals, colleges, nonprofits, and service providers to deliver opportunities, and services to citizens.

Partnerships at the local level involve communities directly in the program. Partnerships with other federal agencies allow for other valuable services: scholarship opportunities, educational resources, etc.

The program takes advantage of innovative uses of technology to maintain those partnerships, to develop and run the program and to support an agency mission.

A well developed IT Capital Planning process integrates business and IT planning processes, enhancing communication between system people and program area business. Working together, the CIO's office and the business offices are able to consider technology that might enable creative and innovative solutions.

Return on Investment – Neighborhood Networks is a very low budget program, creating the opportunity for a relatively large return on investment. While HUD has not collected data to measure the impact of Neighborhood Networks, owners and managers of HUD multifamily insured and assisted properties have conducted surveys of their residents who attended Neighborhood Networks centers and found that the residents: Income earnings increased; academic achievement improved; and involvement in community activities increased. The owners and managers also found that the properties where Neighborhood Networks centers were located had a decrease in vandalism and crime and an improvement in the appearance of the property making it more marketable. CIO's office and the business entities work in partnership. There is an openness to consider technology to enable creative and innovative solutions.

There has been a great deal of outreach and marketing to the public – conferences, fairs, mailings – basic grass roots approach to promoting the program. Feedback from users and stakeholders is used to mitigate risk and evaluate the program.

Ongoing Challenges and Lessons Learned:

The ongoing challenge for Neighborhood Networks is center sustainability. Because there is no annual funding of the program, centers have to rely on their ability to secure partnerships and grants to deliver its programs and services.

The Neighborhood Networks program would benefit from a baseline and measuring performance to ensure appropriate focus on the right growth.

Case Study 10

Department of Housing and Urban Development

Mission:

A decent, safe, and sanitary home and suitable living environment for every American.

- Creating opportunities for homeownership
- Providing housing assistance for low-income persons
- Working to create, rehabilitate and maintain the nation's affordable housing

- Enforcing the nation's fair housing laws
- Helping the homeless
- Spurring economic growth in distressed neighborhoods
- Helping local communities meet their development needs

e-Gov Initiative:

HUD Homes

Clientele:

Government to Citizen initiative provides realty services directly to citizens through the Internet and web-based applications

Function:

Direct Service/Product Delivery

Description:

HUD Homes is an on-line realty store and one-stop portal for information. Through the site, customers can purchase homes that have been foreclosed on by the federal government. Homeowners who are facing foreclosure also can utilize the site as a non-threatening source of information on how they can prevent the loss of their home.

Streamlining existing processes, HUD Homes provides a loss mitigation approach, an on-line application to FHA, and other valuable services. It is another example of a home grown idea that has grown into a larger-scaled agency-wide initiative.

Success Factors:

Again, the Department of Housing and Urban Development has utilized creative partnerships and use of innovative technologies to create a successful program, the "HUD Homes" initiative. Partnering with other agencies and organizations, the Department and indeed many across the entire government, are beginning to redevelop their programs from the perspective of the citizen, offering comprehensive program services instead of forcing the citizen to interact separately with each individual agency and department based on their needs.

The IT capital planning process is well-developed, integrating the IT and business functions of the program and of the Department.

HUD Homes is a relatively inexpensive program to develop and operate, ensuring that success won't be pinned to a large stream of funding, and that there will be significant return on investment.

A great amount of stakeholder feedback is continually integrated into the program, from both partners and users, shaping the overall development and effectiveness of the initiative. The project team is now developing Spanish language applications to further serve a broad base of constituents.

The program succeeded in taking sales contracts online, both the access to contracts and the submittal, and the program continues to increase targeted outreach – education and knowledge for teachers, officers, and others.

Case Study 11

Department of the Interior

Mission:

Serve as the nation's principal conservation agency. Protect America's treasures for future generations, provide access to our nation's natural and cultural heritage, offer recreation opportunities, honor our trust responsibilities to American Indians and Alaska Natives and our responsibilities to island communities, conduct scientific research, provide wise stewardship of energy and mineral resources, foster sound use of land and water resources, and conserve and protect fish and wildlife.

e-Gov Initiative:

Recreation.gov

Clientele:

Government to Citizen, providing cross-agency information on recreational opportunities on federal lands.

Function:

Information Distribution

Description:

Recreation.gov is one of the 24 cross-agency e-Gov initiatives. It is led by DOI. The initiative provides a one-stop, searchable database of recreation areas nationwide and features online mapping and integrated transactions. The initiative also includes online campground reservations and the purchase of recreational passes, maps and other products. The project aims to expand and include links to recreational opportunities provided by all levels of government.

Recreation.gov presently consists of 14 partnering organizations, working together to provide content, links and information to the program, providing an extensive resource for citizens in search of recreational opportunities and information on government-managed lands and natural resources.

Success Factors:

The management team for Recreation.gov has gone to great lengths to gather and incorporate stakeholder input and feedback into the program. By doing so, the program leaders have succeeded in creating a valuable and well-used resource for citizens looking for information on various recreational activities on federal lands. Input is constantly received and incorporated into the various services that the IT program provides for customers.

The program is well aligned with the DOI mission. It reflects a clearly defined scope and focus that supports DOI goals and the crosscutting goals of several federal agencies.

Recreation.gov provides information and data in universally accessible and easily re-usable formats, encouraging customers and users to borrow and disseminate information to the public, thus increasing the overall impact of the website and the program to reach citizens with valuable accurate information and services.

Program managers are able to clearly mark their progress in developing the initiative and reporting its success because performance measures have been incorporated into the business case for the initiative.

As a decentralized program, there is no hierarchy of program participants. Each of the agency partners on the project is responsible for the quality of content and for the timely development of program material.

An additional advantage to this particular program is that additional investment in technology is cost-efficient because it is primarily a portal site that links to other agency websites, pages and services.

Ongoing Challenges and Lessons Learned:

Working with so much data and so many different partnering agencies and organizations, consistency and accuracy of constantly updated data and information has proved to be a challenge.

DOI especially has learned to anticipate the unexpected. The program managers had to work quickly to develop a backup strategy for operating when major portions of the DOI website were shut down in mandatory compliance with a court order. Thorough risk analysis and alternative strategies and plans are now a routine component of program management.

The next phase of the Recreation One-Stop project will involve working with partners in State and local government to develop XML standards for recreation data ("RecML"). This will allow the seamless exchange of data through web services to a wide variety of information providers. This strategy will allow the wide dissemination of accurate, up-to-date information through multiple channels.

Case Study 12
Department of the Interior

Mission:

Serve as the nation's principal conservation agency. Protect America's treasures for future generations, provide access to our nation's natural and cultural heritage, offer recreation opportunities, honor our trust responsibilities to American Indians and Alaska Natives and our responsibilities to island communities, conduct scientific research, provide wise stewardship of energy and mineral resources, foster sound use of land and water resources, and conserve and protect fish and wildlife.

e-Gov Initiative:

Volunteer.gov

Clientele:

Government to Citizen, enabling individuals to search through a central portal for volunteer opportunities that exist across several federal agencies.

Function:

Information Distribution

Description:

Volunteer.gov (www.volunteer.gov/gov) is a web-based cross-agency initiative that builds upon the success of the Recreation.gov model, enabling government agencies to post volunteer opportunities that can be searched by geographic location, type of work, date of opportunity, and/or sponsoring partner. DOI is the lead agency on the project, providing the leadership and program management for this successful initiative.

Citizens interested in volunteering for opportunities around the country can use this one-stop website to access information on the numerous different kinds of opportunities that are provided by a wide range of partnering agencies and organizations. The site provides valuable information, and then links the user directly to the manager or organization associated with the volunteering opportunity.

Success Factors:

One of the success factors for this program is that the initial scope was small, based on an initial need among participating agencies, and it grew organically, based on the positive response it received and the positive impact it was making.
The program was built upon the successful Recreation.gov model, utilizing the success factors of that program and benefiting from the lessons learned there.

Volunteer.gov continues to be linked to Recreation.gov in several significant ways, including shared program managers. In addition, the same team that developed the successful Recreation.gov initiative is developing Volunteer.gov, bringing to it the same dedication and leadership.

Additionally, Volunteer.gov has been an inter-agency cross-government program from the beginning, so there are few barriers to integrating the different agency material and providing the portal site and cross-government information.

Ongoing Challenges and Lessons Learned:

One of the challenges facing Volunteer.gov project managers is how to find effective ways of measuring the impacts of the program and the website. For privacy and security reasons, Volunteer.gov does not retain any personal information on users, yet without this information, it is difficult to determine the effectiveness of the site in directing specific users to their final destinations. As well, it has proved difficult to determine whether users did become volunteers for one of the partnering organizations.

Case Study 13

Department of the Interior/ U.S. Geological Survey

Mission:

Serve the nation by providing reliable scientific information to describe the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

The multi-faceted mission of the National Biological Information Infrastructure (NBII) — an extension of the more comprehensive DOI and USGS missions: develop the ability and resources to transfer the information gained in research and monitoring to resource managers and to others concerned with the care, use, and conservation of the nation's resources. Provide reliable scientific information to all U.S. citizens while recognizing a special obligation to serve the biological information needs of the Department of the Interior Bureaus.

e-Gov Initiative:

The National Biological Information Infrastructure (NBII)

Clientele:

The NBII is a broad, crosscutting system that serves all three client areas identified: government to citizen, government to business, and government to government. Program clients include:
· *Scientists* from the public and private sectors who need access to quality data to help design and direct their research.

· *Planners and decision makers* in the public and private sectors who need timely, credible data to make knowledgeable determinations about managing the nation's natural resources.
· *Educators* who need the most relevant and stimulating materials to enlighten their students or support research. Similarly, students from all levels are among the list of customers.
· *Private citizens* who need unbiased information, for instance, to take advantage of recreational uses of natural resources, such as watching wildlife.

Function:

· Grants management
· Procurement and Acquisition
· Regulation and Permitting
· Information Distribution
· Direct Service and Product Delivery

Description:

The National Biological Information Infrastructure (NBII) is coordinated by USGS. It is a web-based, partnership-driven program that provides access to data and information on the nation's biological resources. Although development started in 1993, predating any formal E-government initiative, the NBII typifies the E-government concepts outlined in the President's Management Agenda. Moreover, a citizen-centered emphasis is entirely consistent with the NBII's history, mission, and current activities. A broad range of citizens has used the NBII, and continues to use it, for a multitude of reasons. The objective of meeting citizens' needs continues to shape the program's development.

Success Factors:

Stakeholder Input – Referred to as "the nation's living library," the National Biological Information Infrastructure has been developed with considerable stakeholder input. Stakeholder input is solicited routinely via focus groups, stakeholder meetings, and through Web feedback loops, and is then factored into programmatic strategic planning. Input received from interactions with stakeholders is evaluated by the NBII Steering Team, and is discussed regularly at their monthly meetings to ensure that Program objectives are adequately meeting stakeholder needs. Many stakeholders become NBII partners, and thus help to shape the future of the NBII through contributions of data, expertise, and feedback, and through participation in NBII national meetings where long-range decisions are made.

Capital Planning – A Capital Asset Plan and Business Case for FY 2003, also known as Exhibit 300, was developed by the NBII Program Office staff and was reviewed and approved by the USGS Executive Investment Review Committee, Procurement Official, and Chief Financial Officer. The business case was finalized in conjunction with personnel from the Chief Information Officer's office in DOI, and was submitted to the Office of Management and Budget (OMB) for evaluation. At OMB, it received a score of four points out of a possible five. Currently, a Capital Asset Plan and Business Case for FY 2004 has been approved by all appropriate individuals at USGS and DOI and will be submitted to OMB along with the USGS budget in September.

Aligned with Overarching Mission – The NBII's mission is consistent with a core mission of the USGS: to develop the ability and resources to transfer the information gained in research and monitoring to resource managers and to others concerned with the care, use, and conservation of the Nation's resources. Additionally, the USGS FY 2002 Annual Performance Plan validates the necessity for the NBII's dual tasks of: (1) providing a single point of access for USGS biological data and information: as well as (2) playing a leadership role in coordinating biological data and information from other organizations in order to provide a clearer picture of the Nation's biodiversity and natural resources.

Project Management – The NBII will use earned value analysis as part of an overall performance-based management system (PBMS) to monitor the progress of the Program and to help establish realistic cost and schedules, monitor these, and take corrective action when necessary. Such analysis is one critical component of our

overall approach to assessing and managing performance, the goal of which is to ensure the timely, cost-effective achievement of objectives, implement corrective actions when needed, and maximize the return on the program's investment. To facilitate the use of earned value analysis, the NBII is evaluating the use of several software packages, all of which are ANSI/EIA Standard 748 compliant.

Strategic Partnerships – The NBII is a multi-entity program coordinated by the USGS. The partnering agencies and organizations are numerous, including federal agencies, state agencies, international agencies, inter-agency groups, non-government/non-profit agencies, academic partners, and private industry.

Fundamental to the NBII Program's growth and success is its capacity to build and strengthen partnerships across federal, state, local, international, academic, private sector, and non-profit scales in accordance with the Federal Enterprise Business Model. If the NBII is to succeed in providing qualitative and quantitative natural resources data and information to decision-makers, it must incorporate all of these sectors in order to ensure a complete picture, drawn from the best possible sources. These partnerships not only facilitate data sharing, but also enable leveraging of funding by all parties, making possible more comprehensive products than those that would be created from allocated funds alone.

Security and Risk Analysis – Risks were identified and evaluated in the following categories:

- Organizational and change management
- Business
- Data and information management
- Technology
- Strategic
- Security
- Privacy
- Project resources

Each identified risk was described in detail, the probability of occurrence determined, and the potential impact to the overall project assessed should the risk occur. The probability of occurrence and the impact were assigned a numerical value for each risk as follows: Low = 1; Moderate = 2; High = 3.
Occurrence scores were multiplied by impact scores and plotted on a graph to determine an overall program risk score. The process was repeated for each of four alternatives considered for the project strategic management plan.

Ongoing Challenges and Lessons Learned

Even though the formal USGS enterprise architecture is not yet in place, preliminary work has been completed as part of the creation of the USGS GIO[1] function. The USGS Architecture Team is utilizing the Federal Enterprise Architecture and Zachman Framework as the foundation for its work. In addition, the USGS is an active participant in the development of the Department of Interior (DOI) architecture. The simultaneous development of the DOI and USGS architectures enhances information sharing and will help insure consistency and symbiosis between the USGS and DOI enterprise architectures.

[1] The USGS Geographic Information Office (GIO) combines the functions of Chief Information Officer (CIO), Chief Technology Officer (CTO), Chief Knowledge Officer (CKO), and Geographic Information Systems (GIS) into one organizational unit.

Case Study 14

Department of Justice

Mission:

Enforce the law and defend the interests of the United States according to the law, provide Federal leadership in preventing and controlling crime, seek just punishment for those guilty of unlawful behavior, administer and enforce the Nation's immigration laws fairly and effectively, and ensure fair and impartial administration of justice for all Americans.

e-Gov Initiative:

Non-specific

Clientele:

Government to Citizen, providing access to public information, alerts, and outreach efforts.

Function:

Information Distribution

Description:

The Department of Justice is a partnering agency in 19 of the 24 Federal cross-agency e-Gov initiatives, contributing content and information resources. In addition to that participation, the Department is working to define, develop and implement a comprehensive citizen-focused IT strategy. DOJ is planning to modify and enhance its website as the cornerstone for all of its citizen-focused strategies and initiatives.

Traditionally DOJ has not had a strategic goal of public interaction as part of its mission alignment. Recently the agency has developed several citizen-focused objectives designed to interact with citizens and constituents. Two primary initiatives are a redevelopment of their website, and an implementation of a multi-media communication strategy designed to release information to the public as well as accept public queries and feedback.

The redeveloped website will have a better search engine for easier navigation and will communicate policies, events, and information of value to the public through dynamic publishing and interactive information collection.

Success Factors:

DOJ has implemented an effective process to review and prioritize IT initiatives. The prioritization is based on the alignment of the IT initiatives to the strategic goals of the Department – counter-terrorism, interagency communication, and implementing security.

Additionally, developing a capital planning process for IT decisions and investments, the Department has implemented the Select phase of GAO's ITIM capital planning process. The Department has the constructs for the control phase, but they are still working to develop effective performance measures to implement the evaluation phase.

While program and project managers are held accountable for their results, project management is decentralized, inviting a great deal of autonomy. The Department monitors major initiatives with particular attention to how well projects meet budget and schedule goals, adherence to information security standards, and the degree to which the projects facilitate information sharing. All project development and implementation must follow the Department's system development life cycle (SDLC) methodology. If the DOJ SDLC it is not used then a comparable SDLC methodology must be identified and approved prior to project initiation.

DOJ continues to develop strategic partnerships where business processes transcend organizational boundaries, make use of identical or similar data, or utilize similar technologies. Among the initiatives identified are: Electronic Case Filing – bringing together the needs of the courts and the attorneys; the Drug Enforcement Administration's Diversion Control initiative – an effort to ease reporting burdens on the medical industry; and the Entry/Exit visa program, designed to improve the capability to fight terrorism and enforce immigration laws in collaboration with other federal, state, and local law enforcement agencies.

Ongoing Challenges and Lessons Learned:

DOJ has achieved a high degree of success dealing with cross-agency initiatives, such as the wireless initiative developed in partnership with the Department of Treasury. In cross-agency partnerships, the Department has a defined level of commitment whereby managers have followed through with design and implementation activities. By engaging senior Departmental leaders in discussions, the Department has begun to utilize executive buy-in and alignment with business direction to achieve success.

DOJ experienced challenges with regard to the cultural change management involved in developing an effective IT and e-Government strategy. Top level buy-in and senior leadership are crucial to recent successes in this area.

In the past, performance measures tended to be technical outputs rather than business outcomes. The problem stemmed from a difficulty in integrating the business processes with the IT applications. New senior level leadership focus will ensure that technical and business process teams are working together to develop integrated strategy and initiatives that can truly streamline and/or redefine the way the Department conducts its business.

In the management of specific initiatives, the Department was challenged in implementing comprehensive risk analysis. Often the analysis was actually conducted after the fact, to comply with regulations and guidelines. As a result, security was not consistently factored into system designs, but instead had to be retrofitted.

Another challenge that the Department of Justice faces, along with many other Departments and agencies, is the need to address the evolving missions and objectives chartered by Congress. This has produced challenges in developing an IT strategy to support a changing mission. For example, after September 11 the Department was asked to assume a larger role in the war against terrorism — involving a need for more data sharing and a greater focus on IT security. This challenge initially placed DOJ in a reactive mode, waiting for a next set of mandates, instead of a proactive mode involving how best to anticipate use of IT initiatives to streamline, revolutionize, and achieve success. With guidance and support from a new CIO, DOJ is more proactive in developing strategic technology initiatives to support the role of the Department.

Historically, components within DOJ were responsible for managing their own IT infrastructure. This led to disparate systems unable to cross-communicate. The Department identified the need for and is moving toward a unified architecture that will enable e-Government. Managers reengineered the process of developing an enterprise architecture. Using the Technical Reference Model as a baseline, the Department has secured executive buy-in and leadership.

Case Study 15
Department of Labor

Mission:

Foster and promote the welfare of the job seekers, wage earners, and retirees of the United States by improving their working conditions, advancing their opportunities for profitable employment, protecting their retirement and health care benefits, helping employers find workers, strengthening free collective bargaining, and tracking changes in employment, prices, and other national economic measurements. Administer a variety of Federal labor laws

including those that guarantee workers' rights to safe and healthful working conditions; a minimum hourly wage and overtime pay; freedom from employment discrimination; unemployment insurance; and other income support.

e-Gov Initiative:

GovBenefits

Clientele:

Government to Citizen, enabling citizens to research benefits directly through the internet

Function:

Benefits Management

Description:

GovBenefits is a partnership of many Federal agencies and organizations with a shared vision - to provide improved, personalized access to government assistance programs.

GovBenefits is one of the 24 Presidents Management Initiatives. An innovative one-stop website, citizens can determine which government benefits programs meet their needs and how they can apply for assistance. Eleven agencies presently partner on the site, providing content and service through a single point of entry, allowing citizens access to information on 133 cross-cutting government benefit programs. The site is expanding continually, aiming eventually to provide information for all government assistance programs.

DOL is the managing agency on the project, leading the initiative, building the business cases, and providing the program and project management.

Success Factors:

One of the key success factors for this initiative was strong program and project leadership. DOL has a structured IT Project Management methodology to ensure that an IT project progresses toward the achievement of its objectives in accordance with planned or revised cost, schedule and technical baselines, as well as performance outcomes. Risk analysis is built into the Project Management process and is reviewed throughout the development and expansion phases. Cost and budget, deliveries and software, and partner performance are validated regularly.

DOL is aware of the importance of maintaining a close, cooperative partnership with the other agencies contributing to the initiative. DOL managers integrate and respond to all efforts of partner agencies, and exhibit their own support for and dedication to the initiative. As a result the partnership has met or exceeded all of the program requirements and goals.

In an effort to maintain support and focus, DOL has upheld an aggressive policy of expansion and development, rolling out a new product or service every 30 days. Showing results against established performance metrics and building upon the success in performance, DOL also has implemented a successful partnership strategy. Predicated upon a strong business case, the focus of the project is maintained with clear, accurate 2 to 3 page action plans that are distributed among the partners, detailing what needs to be done by whom. The relationship among partners is mostly informal and supportive, with no official hierarchy developed or established.

Ongoing Challenges and Lessons Learned:

While DOL recognizes the enormous opportunity for transformation, funding for cross-agency initiatives in an age of competitive needs will continue to be challenge. Also, the Department is aware of the need to remain flexible as plans are progressing for a federal architecture.

Case Study 16

Department of Labor

Mission:

Foster and promote the welfare of the job seekers, wage earners, and retirees of the United States by improving their working conditions, advancing their opportunities for profitable employment, protecting their retirement and health care benefits, helping employers find workers, strengthening free collective bargaining, and tracking changes in employment, prices, and other national economic measurements. Administer a variety of Federal labor laws including those that guarantee workers' rights to safe and healthful working conditions; a minimum hourly wage and overtime pay; freedom from employment discrimination; unemployment insurance; and other income support.

e-Gov Initiative:

E-Authentication

Clientele:

Similar to GSA's e-authentication program, this program applies to a broad range of clientele categories:

Government to Citizen, it may enable advanced transactions to occur between agencies and citizens that they serve directly.

Government to Business, this initiative may open the door to more and more types of online business transactions.

Government to Government, this initiative holds the potential to streamline the way sensitive data is handled and delivered both inside the federal government and between governments of different countries.

Function:

Information Distribution

Description:

E-Authentication is the safeguarding of valuable or sensitive information during electronic transactions. By authenticating the "identity" of a given user, the IT system can continue to deliver the service, or conduct the transaction.

In striving to achieve an effective method of e-authentication for transactions between the Department of Labor and its users, the Department developed an innovative contest for the IT team. Two separate teams within the Department embarked on a single mission: to create the most effective and viable system of e-authentication. The two teams had a similar work timeframe, and there were certain standards each team had to maintain – off the shelf software, data standards, risk analysis, etc.

Writing a single business case that included both teams and their respective approaches to the challenge, the Department of Labor set the two teams in motion. The ultimate strategy emerged with a direction selected by the GSA-led President's Management Initiative on E-Authentication, and they intend to merge the results of the competition with GSA's and the other partners' work on that cross-agency initiative.

Success Factors:

Creating an environment of spirited competition, the Department of Labor achieved a great level of commitment, ownership and dedication to this project, including quality, timeliness and morale.

The Department was careful to establish clear standards where necessary to ensure that both of the IT teams worked toward a product that would integrate seamlessly with the intended applications and programs.

Using the Department's structured IT Capital Planning and Performance Measurement process, clear goals and performance measures were established and the two competing projects were able to gauge their success and progress, both internally as a project management tool, and externally, against each other in the competition.

The Department of Labor implemented some sophisticated knowledge management technologies and processes to gather the program results and the program data all along the way, ensuring that all of the experiences and information was captured and organized for future management decisions.

The program was developed with a great deal of flexibility, intended to be conducted in phases, so that in the case that one of the approaches to e-authentication proved early on to be most appropriate, the Department could redirect resources.

To that end, the Department ensured that each of the two competing teams conducted the same risk analysis so that the assessments and comparisons would match up – comparing apples to apples.

The internal flexibility also allowed for the Department to re-align the business cases and strategies as the initiative progressed.

DOL e-Government initiatives benefit from strong buy-in and leadership from the upper levels of management, as well as a focused alignment to the strategic mission and business objectives of the Agency. The DOL has an Investment Review Board Structure which evaluates investments and ensures alignment between IT investments and the mission, goals and objectives of the Department.

Case Study 17
Department of the Navy

Mission:
Maintain, train and equip combat-ready naval forces and fleet marine forces of combined arms capable of winning wars, deterring aggression and maintaining freedom of the seas.

e-Gov Initiative:
Non-specific

Clientele:
Although the Department of the Navy's (DON) e-Government program gives emphasis to internal efficiencies and procedures, there is also significant effort applied to government-to-business interactions as the Department automates and streamlines procurement and acquisition processes. There are also DON government-to-citizen initiatives that provide certain categories of Departmental information.

Function:
Internal Efficiencies, Information Distribution, Procurement/Acquisition

Description:
The Department of the Navy is pursuing e-Government strategies to fundamentally redesign its business processes. The Office of the Chief Information Officer wrote a Departmental e-Navy Strategic Plan and also an e-

Government policy. However, there remains resistance to change and an environment in which diverse commands manage IT expenditures and develop projects to meet local mission needs.
To help overcome such issues, the DON eBusiness Operations Office (eB Ops Office) was chartered in September 2000 to act as the Department's eBusiness change agent and center for eBusiness innovations. This office maintains a clearinghouse of industry and government eBusiness/e-Government initiatives, conducts market research, and provides consulting services to DON organizations. This office assembled the right mix of knowledge, expertise and current technical acumen to facilitate e-Government transformation.

The DON eB Ops Office also manages the Department's eB Pilot Program. This program funds short term (90 to 120 day) eBusiness/e-Government projects that are conceived and developed by DON commands. This program provides exceptional e-Government ideas an opportunity to be tested, avoids duplication of effort throughout the DON, and shares successful ideas across the Department. New projects are started throughout the year. Pilot proposals are accepted at any time and the eBusiness Operations Office evaluates submissions every 30 days.

To date, the eB Ops Office has funded over 30 initiatives. With few exceptions, the initiatives have been quite successful. One of the projects, Medical Appointments on the Web, was selected by the Service Deputy Surgeons General for implementation across the entire Department of Defense (DoD). Implementing this one medical application provides additional functionality over another solution being considered by the medical community and will be implemented across DoD for $2M, a cost avoidance of $18M from the $20M cost of the alternative solution.

Success Factors:

Executive Sponsorship – The Department of Navy's CIO and other high level leaders were actively involved in the establishment of the eB Ops Office and in the subsequent success of the office to develop IT and e-Government strategies and initiatives. This backing is also evident in the DON support of the DoD Business Initiative Council which pursues "quick-hit" and long term e-Government initiatives to improve DoD business operations.

Inventive Leadership – The Department's Office of the Chief Information Officer created an e-Government scorecard that is approximately 90% complete. When finished, this scorecard could be used as a basis to create similar vehicles for use by other Federal government agencies. Because of this experience, the Navy is under consideration to head a Federal task force to develop e-transformation metrics.

Advertising – The Department of the Navy works diligently to widely advertise the advantages of e-Government as well as the resources available from the eB Operations Office. For instance, the Department promoted several eB pilot projects for both internal and external e-Government awards. The spring 2002 issue of Chips magazine featured the eB Ops Office and other e-Government initiatives. Also, e-Government and the eB Ops Office are promoted by presentation and display at diverse meetings, forums and conferences across the Department.

Functional Area Managers – The Department of the Navy established functional area managers (FAMs) to help integrate "stove-piped" functions and processes. The FAM's will see the big picture and redress overlapping processes and duplicate legacy systems. They will develop and manage applications and database portfolios and ensure that technology strategies are aligned with business and administrative processes and warfighting strategies.

Evaluation Criteria – Through the eBusiness Operations Office, the Department of the Navy developed and documented eBusiness/e-Government initiative evaluation criteria. The eB Ops Office uses these criteria to select eB Pilot Projects and to assist commands with e-Government planning. Use of the criteria dramatically increases chances of successful IT and e-Government initiatives and ensures that programs are well-developed and closely aligned with Departmental mission and goals.

Ongoing Challenges and Lessons Learned:

The Department of the Navy and the eBusiness Operations Office will establish performance measures for e-Government initiatives and strategy in order to document successes. Similarly, baseline data must be gathered and developed in order to measure against and accurately reflect program performance.

Case Study 18

Department of State

Mission:

Create a more secure, prosperous and democratic world for the benefit of the American people. Function as the lead institution for the conduct of diplomacy.

e-Gov Initiative:

Foreign Affairs Systems Integration (FASI) Pilot

Clientele:

Government to Government, providing information resources and services to Department staff and inter-organizational knowledge management capabilities.

Function:

Information Distribution, Direct Service/Product Delivery

Description:

The Foreign Affairs Systems Integration (FASI) pilot provides knowledge management information technology to improve the collaboration among numerous US foreign agencies and other international entities. After a State Department advisory panel found U.S. embassies needed improved cross-organizational capabilities, the Department of State developed a strategy for a comprehensive extra-net. The project aims to streamline information sharing and collaboration among agencies at U.S. embassies around the world.

The FASI will run a pilot program in Mexico, hoping to dramatically redesign knowledge management practices and processes, creating new levels of interaction and collaboration among diverse government agencies and locales.

Success Factors:

Strong Leadership – There was a dramatic change in the level of commitment when Colin Powell was appointed Secretary of State. He stated in testimony to Congress "wearing my CEO hat, I want to highlight (one of) my three highest priorities: Information Technology. We are going to get into the state of the art with the State Department."

On another occasion he emphasized to State employees: "I am absolutely persuaded of the transforming nature of this new technology and what it is going to do to the world....we have to be an essential part of this transformation of information technology."

Additionally, the initiative has strong support from the CIO and the CIO's office, providing even more momentum and ensuring project partners participate fully and remain dedicated to the development and implementation.

Building the Business Case – Across the entire State Department, this year there were approximately 150 projects submitted and supported with Form 300's. The FASI effort was included in these submissions. Each submitted

project goes through a technical review group, management review group and then to the IT Review Board. All projects are assessed individually and rated based on support of agency mission, cost/benefit, and risk.

Stakeholder Input – In order to achieve high levels of stakeholder input and buy-in, managers used team-building exercises, off-site meetings, and demonstrations of the prototype. Such dedication to stakeholder relations and relationship building has contributed to easing tensions when conflicts occur and the partners are able to work together to resolve the challenges more effectively.

In working with partners to achieve buy-in and participation, managers approached the project from a knowledge management angle rather than a business process angle in order to successfully establish the goals of the program and the participation of partners.

Risk/Security Management – Because each agency involved has its own unique infrastructure, it was decided to use extra-net as the work-around solution. When PKI emerged, managers worked with the National Security Agency to ensure that they were staying in step with the Federal Enterprise Architecture. The Department of State has now become a partner in the GSA-led e-authentication project, one of the 24 President's Management Initiatives.

Ongoing Challenges and Lessons Learned:

Consensus – Due to a constant shift in levels of interaction with different agencies, it can be difficult to get all of the participants to agree on a similar course of action. Using the team-building exercises, off-site meetings, and prototype demonstrations, the Department of State has achieved a great level of success in reaching agreement that this will remain an ongoing factor to success.

There is still the critical question remaining as to who will fund on-going maintenance. There will need to be leadership support in getting this issue resolved.

Partnerships – Some of the partnerships established are informal and voluntary. There can be a loss of support when other priorities surface. Managers prefer that partnerships be formalized; however that creates its own set of challenges. Managers are working to keep partnering agencies fully engaged by demonstrating the usefulness of the project. Getting information available on the extranet creates new versatile avenues of access to information that previously had been more difficult to locate and share.

Long-Term Maintenance – It remains to be determined who will be responsible for funding and maintaining the program, including the security of profiles established in the system. Preliminary plans call for each agency to contribute to fund their requirements. There has been informal funding to get the project started, and clear guidelines need to be established to support the long term financial and project management concerns.

Case Study 19
Department of State

Mission:

Create a more secure, prosperous and democratic world for the benefit of the American people. Function as the lead institution for the conduct of diplomacy.

e-Gov Initiative:

Open-Net Plus

Description:

When Secretary of State Colin Powell arrived at the State Department, only 15% of the staff had direct access to the Internet through a separate network (to minimize security risks) and 60 to 70% had "down the hall" access. This lack of full access to the Internet and technology applications was immediately recognized as a significant obstacle to operating a critical agency in the 21st Century and merging with new federal e-government strategy guidelines.

The "Open-Net Plus" initiative is a network modernization effort designed to provide full Internet access to all departmental staff. Fifty percent of employees already have been moved to this integrated network and managers anticipate that 100% of employees will be on board in FY'03.

Reduced program costs are a goal of this modernization effort. Prior to this initiative the department was investing its resources to deploy three distinct networks with only one providing Internet connectivity. Other cost efficiencies were gained by eliminating decentralized purchases of numerous software licenses through Department-wide enterprise licensing; establishing centralized administrative support; and using VPN's to expand communications with reduced telecommunications costs.

Success Factors:

There was a dramatic change in the level of executive commitment when Colin Powell was appointed Secretary of State. He stated in testimony before Congress "…wearing my CEO hat, I want to highlight (one of) my three highest priorities: information technology. We are going to get into the state of the art with the State department".

Speaking to State Department employees at an earlier meeting Secretary Powell said: "I am absolutely persuaded of the transforming nature of this new technology and what it is going to do to the world….we have to be an essential part of this transformation of information technology."

This support from the Secretary ensured that the initiative was easy to sell across all agencies, and ensured that it achieved great levels of support from all partners.

By establishing a baseline, IT managers were able to clearly define a starting point, and then work toward achieving the end goal – 100% of State employees being moved to the new network.

Additional Performance measures are based upon overall response times, which should improve as everyone is integrated into a single network.

Ongoing Challenges and Lessons Learned:

Risk Assessment and Mitigation – Risk and security issues remain a challenge for management, and managers have implemented multiple layers of protection (such as firewalls). Security is managed by both technology and operational procedures. All users are required to attend training on maintaining Internet security.

However, there remain hurdles to full implementation including security concerns related to browsers, and the lack of telecommunications capability in remote embassies.

Case Study 20

U.S. Department of Transportation

Mission:

Serve the U.S. by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future.

e-Gov Initiative:

"Do It Yourself" Website

Clientele:

Government to Citizen, allowing citizens to conduct transactions directly with the Department of Transportation (DOT) via the Internet.

Government to Business, allowing businesses to conduct similar types of transactions with the Department of Transportation.

Function:

Regulation and Permitting

Description:

The Department of Transportation's "Do It Yourself" (DIY) website provides customers the option of doing business with the DOT at their convenience, seven days a week, twenty four hours a day through the Internet. Virtually every function requiring payment from the public will be available on the Internet, creating a citizen-focused portal for customer service. Customers may pay fines and fees; apply and pay for registrations and licenses; and request and pay for publications, data, and files by using their credit cards or by debiting their bank accounts via Automated Clearing House payments. The Department of Transportation increases its level of outreach and customer service, through the Internet, and customers benefit from faster processing time and reduced chance for third party errors.

Success Factors:

One of the key factors in the success of this initiative was the dedicated project leadership that not only developed the concept of the Do It Yourself initiative, but also brought it to fruition.

Another key factor was that the project started small, not requiring a great amount of resources and requiring little or no institutional change. DIY has developed into an effective program throughout DOT, collecting everything from Transportation Security Administration's September 11 Security Fees from the airline industry to Freedom of Information Act Request Payments from the public. More than 45 applications are currently available on DIY.

Increases in the number of transactions and dollars collected on DIY:

	Transactions Processed	Dollars Collected
FY 2001	18,355	$ 5,973,063
FY 2002	38,719	$ 78,539,963

By integrating the financial and IT management decision-making, the project was able to maximize its potential to affect the business functions that it was designed to support and streamline.

The Department of Transportation built into the program great flexibility, making it easily adaptable to other financial and business applications, to other agencies, and to other departments across the government.

Ongoing Challenges:

Because technology is moving so quickly, it is important to note that DIY's initial challenge was developing the actual technology and mechanisms to enable the federal government to execute on-line collections — All the pieces simply did not exist in 1999. Through concerted efforts by DOT; the Department of the Treasury and their contractors; and the Oracle Corporation, the necessary technology was secured and mechanisms were built to make DIY possible.

Once built, DIY's next challenge was convincing DOT program managers to support the concept. DOT is still overcoming some residual reluctance on the part of some of the business and financial decision-makers to participate fully in the program. However, this is changing as managers see the earlier applications as models for what can be accomplished through on-line collections.

For example, one of the first DOT organizations to use DIY was the Federal Motor Carrier Safety Administration. They are now one of DIY's strongest supporters and process more than 50 percent of their registration applications through DIY. Another DIY success story is the Research and Special Programs Administration's Hazardous Materials Registration Program. DIY has helped cut the Haz Mat Registration process from 4 weeks to 10 minutes.

The last challenge is one confronting all new e-commerce initiatives — funding. DIY is supported by the DOT organizations processing transactions thorough DIY on a per transaction basis. Therefore, cost remains a concern to many of the financial decision-makers. Fortunately, DIY continues to grow exponentially, having doubling its transactions over and again for the last three years. According to the Department of Treasury, DIY ranks third government-wide in dollars collected and seventh in transactions processed. DIY's transaction costs have dropped from $17 its first year to less than $7 in FY 03. DIY's goal is for costs to drop well below $5 per transaction in FY 04.

The Department of Transportation has a new focus on developing an effective and acceptable business case, having had to re-write several cases, while trying to incorporate a balance among the requirements of OMB, the responsibilities of the business and program partners, and the goals of the program.

Lessons Learned:

DIY's primary lessons learned: Start small and go for a quick success. Instead of immediately starting this project department-wide, DIY managers web-enabled one collection stream, the Federal Motor Carrier Safety Administration's Motor Carrier Registration Application process. Other applications and collection streams followed.

DIY's second lesson learned: Do not customize Commercial Off the Shelf Software! Due to DOT's varied collection streams, it was necessary to make changes to Oracle's iStore product. These customizations impacted back-end reporting, and creating workable reports took more time an effort than was first anticipated. Many of DIY's customizations will be unnecessary once DIY upgrades to Oracle's newer 11i iStore software later this year.

Case Study 21

U.S. Department of Transportation

Mission:

Serve the U.S. by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests, protects our environment and enhances the quality of life of the American people, today and into the future.

e-Gov Initiative:

Docket Management System

Clientele:

Government to Business, and Government to Citizens, allowing for businesses, citizens and interested parties to view official public record information that pertains to specific rule-making and adjudicatory procedures
Function: Regulation, Adjudication and Permitting

Description:

The Docket Management System (DMS) is an electronic, image-based database designed to store and display via the Internet all DOT docketed information (a docket is an official public record) for easy research and retrieval. DMS also allows businesses and citizens to submit comments to DOT's dockets electronically. Information from all DOT Offices (delete will soon be) is now available through the Internet database.

DOT provides on-line information about proposed and final regulations, information on adjudicatory actions, public comments on proposed rules, and related information in the DMS. DOT uses this docketed material when making regulatory and adjudicated decisions, and makes docketed material available on-line for review by interested parties.

The Dockets Office reviews all documents to make sure they meet filing requirements, registers the document into the DMS, scans hard copy documents received, performs quality assurance, and saves the image of the document to an optical disc. Customers can then retrieve the image through the Docket Management System.

Success Factors:

As with the "Do It Yourself" initiative, one of the key factors in the success of this initiative was the dedicated project leadership that conceived and developed the concept of the Docket Management System. The project leader was a lawyer, knowledgeable in departmental and agency requirements while IT was the enabler.

The project required some start-up investment and it developed quickly into a very effective program. In addition to providing businesses and citizens with on-line access to DOT information, this system also saves the government over $1.3 million annually in space and personnel costs alone.

Constant and active stakeholder involvement and feedback helped to develop the program, incorporating the suggestions and comments of customers who are involved with and affected by the entire rulemaking process.

The development of an effective set of common data standards was key as well.

Ongoing Challenges and Lessons Learned:

It was a challenge to integrate the needs of the many disparate groups of partners and stakeholders reconciling all of their input and into one system and underlying process. On-going support to the business, anticipation and management of the challenges throughout the cultural, technological and process changes were difficult tasks.

Case Study 22

Department of Treasury/Internal Revenue Service

Mission:

Provide America's taxpayers top quality service by helping them understand and meet their tax responsibilities and by applying the tax law with integrity and fairness to all.

e-Gov Initiative:

EZ File

Clientele:

Government to Citizen, enabling citizens to file and submit taxes electronically through the Internet.

Function:

Direct Service/Product Delivery

Description:

The Internal Revenue Service has partnered with a consortium of private sector companies to offer online tax filing services. Developing the product and implementing the initiative, the consortium will offer the product for free to 60% of the population. The other 40% will be charged a fee for service, which varies by product.

The IRS hosts the web page and provides taxpayers with links to the Free Services offered by members of the Consortium. During the term of the agreement, IRS agrees not to compete with the Consortium.

Using this unique business model, there is no IT investment on behalf of the IRS or Treasury Department, other than resources to monitor and manage the project to ensure that the program achieves it intended results and the cost of developing and maintaining the web page on the existing IRS site.

Success Factors:

Supporting Agency Mission – The initiative directly supports the Internal Revenue Service's mission of providing American taxpayers top quality service and helping them meet their tax responsibility. It also supports the IRS Restructuring and Reform Act of 1998 which encourages 80% electronic filing by 2007. Such a close alignment with the agency mission and statutory goal helps ensure that the initiative will be supported by both internal and external stakeholders, with clear linkage between program and agency performance. The initiative aims to promote higher quality services by utilizing the existing expertise of private sector:

- To maximize customer choice
- To promote competition for such services
- To meet objectives in the least costly manner

The input from Stakeholders was critical, and drove the IRS decision. Since the agency was not actually developing any software or IT initiatives themselves, the stakeholder needs and considerations were not so much an IT issue as they were a negotiation target. The entire process and product was defined and negotiated based upon the feedback and needs of stakeholders.

The majority of the feedback received on the specific EZ File initiative was to "Proceed!"

Return on Investment – The ROI for this project is significant. The IRS is not actually dedicating any money toward IT development; they are rather managing the partnership with the private sector companies to deliver the

product. Thus for a very small commitment of resources, the agency is receiving a tremendous amount of deliverable service for their constituents.

Partnering vendors will provide most customer support functions as well.

Public/Private Partnerships – The innovative partnership was devised because without partnerships, the IRS would face a dilemma: how would they be able to provide this valuable service for citizens and develop e-government strategy without competing directly with private sector companies who were already providing such services.

Performance Measures – Current IRS numbers will be used as baseline for measurement. Purported advantages are:

- 78 million people will no longer have to pay to file their tax returns online (currently costs an average of $12.50 in filing fees plus the cost of the tax prep software)
- electronic filings produce refund checks twice as fast as paper filings
- electronic filings reduce government processing costs and improves efficiency
- eventually reduce filing time to 4 hours per year

In addition IRS, in consultation with the Consortium will develop an assessment process including usability performance measurements, which will include at least uptime and reliability through the tax season and web site usability consistent with design principles.

Risk Management – Carefully integrated into the partnership are certain risk management strategies. There is a certain amount of policing that the partners will do to ensure that all are participating appropriately. There is a direct linkage between shared benefits and shared risks – a benefit is free e-filing that is not competitive

Additionally, to mitigate risk of system failure, managers distributed system and network capabilities in order to prepare for peak demand. Each partnering vendor has a separate system as well.

There will be third-party certification of other key issues such as: security, standards, and privacy.

Ongoing Challenges and Lessons Learned:

User Participation – Now that the IRS has developed the initiative, they are faced with the challenge of getting users to participate in the program, making it truly successful.

Privacy and Security remain ongoing challenges as well. There is a certain amount of policing that is built into the partnership, but at the end of the day, each of the partnering vendors is responsible for providing security and privacy safeguards for each of the transactions that occur through their services. Thus, the IRS is very limited in what it can do directly to ensure that security and privacy. There is an effective self-policing mechanism within the private companies however in that their commercial viability is significantly dependent on assuring all their users that data is safe and that it only used for authorized purposes.

Similarly, each of the partnering vendors is solely responsible for all content, software, quality control and constant updates for transactions that occur through their services.

New Partners – The IRS is already looking ahead by including a clause in the agreement that asks the Consortium to work with state tax administrations on similar agreements At present, the initiative is exclusively for federal income taxes and tax services. Several states have already expressed an interest in participating and are discussing agreements with the companies on their own terms which are generally very similar to the federal terms.

Additionally, more partnering vendors will most likely be included in the initiative in the coming years.

CASE STUDY 23

Department of Veterans Affairs

Mission:

Serve America's veterans and their families with dignity and compassion and be their principal advocate in ensuring that they receive medical care, benefits, social support, and lasting memorials promoting the health, welfare, and dignity of all veterans in recognition of their service to this Nation.

e-Gov Initiative:

Non-specific

Clientele:

Government to Citizen – the primary goal of the Department of Veterans Affairs is to directly serve veterans of the U.S. armed forces, providing services, benefits and information.

Function:

Benefits Management

Description:

The Department of Veterans Affairs is responsible for serving the nation's veterans, providing a host of benefit services, from basic benefits information to advanced healthcare services. At present, based on the many different groups of veterans and beneficiaries and the many different types of services and benefits available to them, there are some eight different registrations required with the Department for a Veteran to take advantage of all of the offered services. There are five different 800 numbers to call for assistance or information, each different for each benefit sought.

In order to resolve some of the confusion, the Department is planning in its '04 budget to provide for the development of a single front end eligibility and registration process and a single telephone number to support the entire process.

Information Technology will play a large role in the transition, providing online, transactional and informational support to the Department. A new version of the enterprise architecture will detail a integrated applications that will streamline the old processes—saving the Department money and resources, and providing higher quality services to citizens.

Success Factors:

In 97 days, the Department of Veteran's Affairs created a 603-page document detailing the ambitious new design of their enterprise architecture. Accordingly, they are building websites and online technologies to support each of the Department's separate activities and services, migrating information and processes into the technology applications.

Leveraging strategic partnerships with government and private organizations, the VA has been able to streamline some of its information systems. Partnering with the Department of Defense, VA has been able to access valuable personnel information, saving time and resources for both the Departments and the customers. Partnering with private and public cemeteries and related organizations, the Department has been able to offer more valuable information and services to customers and family members when necessary.

The CIO's office at the Department of Veterans Affairs has very clearly defined the relationship of IT to business: it is the responsibility of IT to make the business community aware of the possible; it is not the role of IT to drive business. Business provides requirements; IT fulfills requirements. The CIO and the CIO's office act as the nerve center, coordinating the integration of IT and business processes.

Performance Measures – The Department has established several overarching goals, measures and thresholds of key parameters. Among them are:

- *Availability* – up time over up time plus downtown – the percent of time that the systems are available? The percentage varies by importance of the system and the information. The goal is 'where to be' and the threshold is 'how to begin'. Some critical percentages are as follows: life threatening needs to be at .9999; telecommunications is at .9996; the unit operating capability of one site is actually .97 and the operating capability is .95. These percentages are kept by logs that track both downtime and outages.
- *Screen Paint Time* – this is another metric that drives the design of a web site.
- *Email* – duration from send to receipt; the differences between sensitive but not classified and privacy only.
- *Data Query* – cyber security – measured by successful intrusions detected/total intrusions detected. Also measure the false alarm rate of intrusions reported, how many were false? All analysis is done prior to production of any new site. They started to document this in the enterprise architecture (630 pages) where they have defined the businesses and the sub-functions, but the discipline is universal and does not have to be slow.

Additionally, at the end of the revised telecommunications Benefits and Services they will have achieved 27% savings overall. In the past they always used to increase bandwidth – now they are changing other elements and getting to the root of the problems.

Utilizing a milestone process similar to that of the Department of Defense, the VA is streamlining their development and implementation processes, employing a rigorous discipline, and escaping from many bureaucratic procedures that often mire other projects. The VA project management process requires the following approvals:

- Project initiation
- Prototype
- Full development
- Deployment
- Post Deployment Performance Measures

Senior Leadership is actively involved in decisions and follow- through, ensuring a high level of discipline is maintained. Senior leaders chair the ITB and milestone review.

They also review and approve all big impact decisions and/or big dollar expenditures, as well as cyber security and network monitoring decisions.

One of the big achievements of the entire program is the consolidation of authority over IT that supports Benefits, Health, and Memorial Affairs. All the separate CIO's were transitioned to Deputy CIOs under the Department's CIO last August, making a big impact in keeping projects and strategies on track and in maintaining clear lines of communication.

Ongoing Challenges and Lessons Learned:

Despite on-going efforts and IT strategy that has been implemented thus far, representatives of VA feel that they need to do more to align with the overarching mission of the Department.

From large scaled cross-agency initiatives to small scaled internal decisions, it is critical to the success of a project to clearly define the expectations of a project and the roles and responsibilities of the partners and players. Doing so eliminates many of the potential conflicts that can impede the success of an initiative.

The Department of Veterans Affairs has not incorporated a large amount of stakeholder input into their process redesign at the present time — rather they are re-developing and streamlining processes that already exist. They

have conducted some user-testing with the website development, and they plan to incorporate more stakeholder involvement in the future.

E-Authentication – conducting a vast amount of transactions via the Internet, e-authentication is a high priority for the Department, and another of the ongoing challenges. Without a standardized federal model to work from, each department has to use their own versions of authentication and security, causing trouble with cross-agency collaboration, and requiring citizens to provide different authentication and verification at each agency.

Similarly, cyber security remains both a top priority and an on-going challenge. As part of IT security management efforts, VA has identified over 200 external connections, and the Department is working to reduce that number and engage more protective firewalls to protect from threats such as the Code Red and Nimda viruses which wreaked over 2 million dollars in damages inside VA.

As the VA develops strategic partnerships with agencies such as the Department of Defense, where they share certain specific information, it becomes very difficult to verify cross-agency data as it is fed into the VA systems.

Better training and discipline is needed to conduct thorough risk analysis for IT strategy. Presently managers use a quadrant system based on past experiences. When a quadrant shows "red," managers must develop a mitigation strategy.

Business Risks – The VA provides services to a specific constituency, and many of those services are governed by specific laws. VA Benefits, VA hospitals, Military Hospitals, pharmacies, Medicare reimbursement –all are governed by specific legal requirements that must be considered and integrated into VA processes and IT applications.

Architecture Risks – One of the most difficult challenges in implementing the new enterprise architecture is getting the requirements baselined so that subsequent changes to those requirements can be properly change-managed. The requirements have a tendency to change for a host of reasons, making the implementation very difficult.

Case Study 24
Environmental Protection Agency

Mission:
Protect human health and safeguard the natural environment.

e-Gov Initiative:
Toxic Release Inventory Initiative. EPA has a number of additional initiatives focused on improving citizen involvement, access and use of information.

Clientele:
Government to Citizen, Government to Business and Government to Government

Function:
Information Distribution, Regulation and Permitting

Description:

The Toxic Release Inventory Initiative is an information sharing program designed to create a collaborative system of knowledge management integrating valuable information and data related to the release of substances into the environment or destined for treatment, disposal or recovery.

Other EPA initiatives include:

- EDOCKET – an internet-based electronic regulatory docket allowing the public to comment on rulemakings and to access other public comments.
- e-Rulemaking – an interagency effort under the President's Management Agenda to transform the rulemaking process using IT.
- One Stop Business Compliance - an interagency effort under the President's Management Agenda using the internet to improve business access to permitting, compliance, and reporting information.
- Recruitment One Stop - an interagency effort under the President's Management Agenda using the internet to improve citizen access to federal employment opportunities.
- e-Authentication an interagency effort under the President's Management Agenda to simplify the process for authenticating individuals using the internet to conduct business with the federal government.
- National Environmental Information Network (NIEN) – an effort to better protect human health and the environment by enhancing the environmental decision making of EPA, states, and regulated entities through the consolidation of independent information systems at EPA, enhancing electronic access to the information, and streamlining the submission and management of the data.

Success Factors:

The Toxic Release Inventory initiative takes advantage of state and local government collaboration to create a comprehensive information distribution network. The NEIN advisory board includes state representatives to help guide the development of the system.

Adopting a shared technology ideology, the EPA has borrowed best practices and technologies from across the federal government in implementing their own e-Government and IT initiatives.

Integrating Legacy Systems – The EPA is using XML to translate data from the older systems to the new ones, thus enabling them to integrate the bulk of their valuable data and information in new applications and management strategies.

Performance Measures –The State of the Environment report, to be released this fall, will serve as a comprehensive baseline for the EPA to use in developing performance measurements. The report will include true environmental indicators as a step towards better linking the agencies decisions and resource allocations with true environmental and human health outcomes.

Ongoing Challenges and Lessons Learned:

The Environmental Protection Agency is in the process of developing a more focused e-Government strategy and application of information technology. Realizing that IT has the potential to be a transforming force, the Agency is looking at ways to provide solutions toward its mission through IT programs.

EPA has implemented an investment review process that helps it determine the value of its major IT investments.

Despite progress through the XML translation process, much of the agency's data is tied up in old stove-piped networks and legacy systems, making it very difficult to integrate it into new applications and initiatives.

The Agency continues to develop a comprehensive enterprise architecture, and then to integrate it with the Federal Enterprise Architecture.

The Agency is finding difficulty, in some cases, to fund e-Government and IT initiatives. A shortage of funds prevents completion of scheduled but unfunded work.

Performance Measures – The EPA is working actively to identify performance measures, but it has been difficult to reach consensus within the organization on what will constitute a comprehensive set of accurate measures.

Case Study 25
Federal Emergency Management Agency

Mission:
Reduce the loss of life and property and protect our institutions from natural and technological hazards by leading and supporting the nation in a comprehensive, risk-based emergency management program of mitigation, preparedness, response and recovery.

e-Gov Initiative:
Disasterhelp.gov

Clientele:
Government to Citizen, providing host of information on emergency preparedness and procedures in case of disaster.

Function:
Information Distribution

Description:
Disasterhelp.gov is an online information site designed to help citizens and organizations respond to disasters by supplying complete information

Success Factors:
The Federal Emergency Management Agency has a very focused mission (emergency mitigation, preparedness, response and recovery). Similarly, the Agency's Disasterhelp.gov initiative is very focused in scope and objective, and is very closely aligned with the Agency's mission of emergency management.

A detailed business case was built for the initiative, although at the time of the interview was still in a revision process with OMB. A detailed timeline was included in the business case outlining clear expectations for program development, and detailing a clearly defined end state. FEMA anticipates a high return on investment based on savings achieved through integration of currently stove-piped processes. To ensure success of the initiative, FEMA is employing effective change management to minimize potential conflicts and enhance all opportunities.

Working with federal, state and local governments, nonprofit organizations and others in the field of emergency preparedness or response, the project management team solicits stakeholder input to ensure that the initiative achieves maximum buy-in and maximum success as it is rolled out.

By rolling out the initiative in phases, with scheduled completions every quarter, managers will be able to achieve early and continued successes, integrating valuable feedback into the ongoing construction, and exercising control over the size and scale of the project. It is anticipated that a phased roll-out will help maintain the momentum of the project.

Following Federal Enterprise Architecture guidelines, FEMA is working to ensure that the system and architecture is open and scaleable, as well as fully integrated with agency architecture and the Federal Emergency Act.

Ongoing Challenges and Lessons Learned:

Getting all the players and the leadership to the table to discuss any concerns and conflicts, and obtaining full support from all partners as early as possible in the planning process, has been valuable This level of commitment has been especially important during the business process re-engineering stage.

Ensuring adequate funding for the initiative is an ongoing challenge.
Program managers have not yet documented performance measures. Some of the proposed measures for future documentation include:

- Website hits
- Return visits
- User feedback
- Reduced risk for First responders to disaster
- Reduced loss of life and property
- Timely dependable delivery of emergency information
- Accuracy of information
- Polling customers

FEMA is anticipating and working to mitigate several risk factors with the new web-based program:

- Partner and stakeholder expectations from release one – FEMA is maintaining open lines of communication to integrate any feedback on the initial roll-outs.
- Ability to handle peak demands on-site in case of a disaster – FEMA is working to maximize server and transmission capacities and abilities.
- Spreading the word about the new program and its applications – FEMA plans to use a PR consultant to design an information distribution campaign.
- Mitigate security issues – FEMA is developing the use of technologies such as log-ins, passwords, and e-authentication for managing links and access to sensitive information.

In working to develop the cross-agency initiative, FEMA would have benefited by having clearer and more precise information from the OMB regarding:

- Over-arching processes already established to assist agencies in establishing partnerships
- More collaborative support tools for early development
- Accurate methodology to quantify the economies of scale
- Clearer direction in determining priorities.

Case Study 26
General Services Administration

Mission:

Provide central leadership and management for the use of Electronic Government in the Federal Government. Help federal agencies better serve the public by offering, at best value, superior workplaces, expert solutions, acquisition services and management policies.

e-Gov Initiative:

E-Authentication

Clientele:

This initiative falls into all three client categories because of the broad range of applications covered:

- Government to Citizen enables advanced transactions to occur between agencies and citizens that they serve directly.

- Government to Business opens the door to more in-depth types of online business transactions.

- Government to Government holds great potential to streamline the way sensitive data is handled and delivered inside the federal government and between governments of different countries.

Function:

Information Distribution

Description:

One of the 24 cross-agency initiatives and a part of the President's Management Agenda, the GSA e-Authentication initiative provides a "gateway to consolidate the validation of multiple levels of authentication." Providing safeguards such as passwords and digital certificates, this single interface establishes a user's "identity" prior to allowing a transaction to occur. The initiative establishes common interoperable authentication solutions for all of the e-Government initiatives, building and enabling the mutual trust and security that is necessary to support widespread use of electronic interactions between the public and government. It also protects the integrity and security of electronic transactions across the federal government.

Success Factors:

GSA created a Program Management office with dedicated workspace for managing this initiative in conjunction with a number of other e-Gov initiatives. This centralized the strategic management and decision-making processes and saved resources by dedicating some of the required expertise to multiple projects.

The team implemented full lifecycle management for the project, with clear goals and performance measures established for each stage of the initiative. As a result of this proactive measure, GSA anticipated and implemented effective change management throughout the project. Among the best methods used to ensure success, GSA incorporated the Software Development Life Cycle Management (SDLC) process. The managers effectively captured and retained valuable knowledge for reuse, using electronic and traditional means to harvest best practices, lessons learned, and educational experiences.

Managers conducted, and continue to update, risk analysis and performance testing. They used the OCTAVE tool (developed by Carnegie Melon) to provide the essential security analysis needed to evaluate the cohesive security elements each of the agencies will bring to this effort. GSA also leveraged the PKI expertise from the U.S. Department of Agriculture and the State Department, an example of the cooperative spirit among all the agencies.

GSA worked almost exclusively with commercial off-the-shelf (COTS) software and products to ensure effectiveness and long-term compatibility.

Ongoing Challenges and Lessons Learned:

Progress in the validation stage was limited due to the number of agencies with transaction sites or processes sophisticated enough to use the e-authentication interactive process. The IRS EZ Filing has been a good candidate to assess the overall effectiveness of the blended architecture due to the maturity level of the initiative.

The GSA initiative essentially was unfunded. Managers had to dedicate considerable time and resources to creative financing to identify where to locate the funding to support the initiative. GSA took advantage of lessons learned within the UK and Canadian e-Authentication programs to develop an appropriate funding strategy.

Imposed timelines and due dates, without the ability to evaluate and control the impact on the project, contributed to the risk.

The enterprise architecture standards and requirements have remained in a state of transition, which has made it more complex to comply without having a clear path to the ultimate end-state. The Solutions Architecture working group is anticipated to play an effective role in maintaining equilibrium across the team goals.

Case Study 27

National Science Foundation

Mission:

Promote the progress of science; advance the national health, prosperity, and welfare; and secure the national defense.

e-Gov Initiative:

FastLane and Proposal, Review and Awards Management Integration System (PRAMIS)

Clientele:

Government to Business and Government to Citizen, providing grant information and application procedures online for universities, non-profit organizations, and individuals such as engineers and researchers who wish to apply for NSF funding.

Function:

Grant management/Information Distribution

Description:

The National Science Foundation's FastLane system processes almost 100% of the proposals for funding received annually. Over 200,000 scientists, engineers and researchers utilize this system to submit proposals, to conduct peer review, and to report the progress of their government-funded research and educational projects. Additionally, Universities and other organizations request funding increments, cash payments and financial reports on billions of dollars through the FastLane system.

Building upon the success of the FastLane system, NSF is developing the Proposal, Review, and Awards Management System (PRAMIS), implementing "next-generation e-Government capabilities." PRAMIS will improve internal NSF processing, focusing on integration and improvement of functions as they relate to two of NSF's principal business processes: Merit Review and Award Management and Oversight.

NSF proposal submissions increased by 19% for FY2002 over FY2001. Despite the increase, they have decreased the handling costs by 33% and postage costs by 54%. Savings already achieved have amounted to over $700K. These savings do not include the savings from handling increased workload without the addition of support staff.

Additionally, NSF is a partner in the E-Grants Initiative, an IT initiative in the President's Management Agenda, working to create a single electronic portal for grant recipients and the grant-making agencies from across the government. The initiative, led by the Department of Health and Human Services, will streamline, simplify and provide an electronic option for grant management.

Success Factors:

A key success factor to the National Science Foundation's FastLane and PRAMIS programs is that the agency itself is relatively small, very localized, with a tight mission, scope and focus. These factors permit development of specialized initiatives and programs with a high degree of success.

As NSF works directly with its many customers/stakeholders - scientists, engineers and researchers – they incorporate the input into the design and implementation process to ensure that they maximize usage, performance, efficiency, and success. Since they are centrally located and managed, it is easier for them to integrate internal systems.

NSF employs many of the newest adaptable technologies and strategies in its initiatives, streamlining processes and increasing performance and minimizing error rates. Fastlane has been presented to Health and Human services as a model for an overall approach to eGrants.

The technology staff and the financial staff work together closely to ensure that the IT applications and programs are integrated effectively with the financial management processes that they support. The Helpdesk is now accommodates the 19% increased workload without additional staffing.

Additionally, the technology and financial teams collaborate in developing business cases and integrating the technology and the budgeting. There is an annual retreat where the combined team resolves mutual challenges.

Ongoing Challenges and Lessons Learned:

As it is very expensive to maintain both electronic and traditional paper-based processes in an organization the agency has worked aggressively to move their entire grants submission process into the electronic process.

The agency recognized that e-authentication is too expensive and time-consuming for small businesses or organizations to bear, so they have implemented appropriate, alternative methods of security and privacy.

As a partner in the E-Grants initiative of the President's Management Agenda, NSF has found that it is challenging to achieve levels of standardization of data and processes across the federal agencies and departments. There is a need for continuing improvement in communications and knowledge sharing. Despite good support from OMB, there remains some disagreement in the best practices and approaches adopted by the partnering agencies.

Case Study 28

Small Business Administration

Mission:

Maintain and strengthen the nation's economy by aiding, counseling, assisting, and protecting the interests of small businesses and by helping families and businesses recover from natural disasters. Achieve this mission through the following strategic objectives: championing small business interests by reducing the burden of laws and regulations, ensuring regulatory fairness); empowering entrepreneurs by access to capital and credit, access to entrepreneurial development assistance, access to procurement assistance; serving as America's Disaster Bank; and implementing the President's Management Agenda.

e-Gov Initiative:

Anytime-anyplace access to information, service, and transactions

Clientele:

The e-gov initiatives fall under the category primarily of Government to Business, but some activities also relate to Government to Citizen (e.g., online eligibility, distance learning for prospective business owners).

Function:

- Information Distribution

Description:

The SBA's vision emphasizes the delivery of improved customer service to help small businesses start and grow. It is focused on satisfying small business expectations, transformation, and changing the way the agency interacts with small businesses. More than two thirds of the small business community uses the Internet. Many if not most find it extremely difficult to deal with government. Repeatedly, small firms have argued that the difficulty in finding business-related information, the complexity in receiving essential service and the unnecessary regulations/ paperwork cost them money and impair their growth. By allowing an individual to access information and services from the bureaucracy, the Internet is shifting power from public institutions to the citizen. Delivering SBA products and services electronically, anytime-anyplace, will save the business owner money, permit the agency to increase outreach, transform the way the agency does business, and improve agency productivity.

Elements of SBA's expanded e-Gov effort include the following:

- *Creation of an e-SBA with a single portal for small businesses to access everything government has to offer.* The new Portal will offer comprehensive information organized in a logical and functionally-driven manner as well as more dynamic and interactive solutions that include electronic access to all of SBA goods and services (e.g., compliance with laws and regulations, e-loans, asset sales, international trade, disaster help, online eligibility and certification, integrated acquisition portal, and a small business learning network). The first effort involves building a startup module that the aspiring entrepreneur can use. The new web presence will also include links to other government goods and services of value to small business.
- *Management of the Business Compliance One Stop Initiative (Regulatory Advisor).* Lead nine federal regulatory and six state agencies in developing a "single face of government" to help businesses find, understand, and comply with laws and regulations at all levels of government. Access to laws and regulations, compliance assistance tools, and online transactions form the core of this 24 month effort to create a web services portal.
- *Participation in various cross-agency E-Gov initiatives.* As the single point of entry for all that businesses need, SBA will offer web services: interactive, personalized information and service that is cross-agency, multi-functional, and intergovernmental and features a number of cross agency initiatives:

- Legal and Regulatory Burden Reduction: Regulatory Advisor (Business Compliance One Stop);
- Easy Access to Financial Assistance: federal asset sales, e-loans, and international trade streamlining;
- Distance learning network: online tools, courses, tutorials, and customer relationship management;
- Coordinated Disaster Assistance: paperless loan application and processing, harmonized loss verification;
- Integrated acquisition portal: online eligibility for 8(a) firms, marketplace created for small business buying and selling, and registry of small firms interested in selling to the government, plus an online tool for how to sell to the government; and
- On-line administrative management systems (e.g., travel, procurement, personnel).

Utilizing web portals, SBA intends to provide valuable information, service and transactional help (web services) to its small business constituents around the country. One of the primary objectives under the Business Compliance One Stop is to reduce burdens on small businesses by streamlining reporting requirements and making it easy to find, understand and comply with governmental regulations.

Success Factors:

Ultimately, SBA's critical success factors in its e-Gov efforts all lead to one outcome—increased small business success—and include the following:

- Anytime, anyplace government accessibility and accountability
- Increased convenience and improved customer service
- Transformation in the way government and businesses interact
- Reduced burden on small businesses, resulting in savings
- Increased rate of compliance.

To succeed, the Agency must ensure effective and cost effective partnerships with federal and state and local governments, resource partners, and industry. Moreover, leadership, incentives to engage in transformation activities, and resources are required to implement the e-Gov agenda.

SBA has a clearly defined mission and a well-developed architecture and infrastructure, enabling it to focus the scope and development of e-Government initiatives. Developing and maintaining a clear focus and scope allows SBA to capitalize on its efforts, intending to serve as a clearinghouse for reliable, useful information and solutions. The SBA understands that it cannot be all things to all people, so it determines existing customer needs and then provide content to suit those needs. The SBA is developing partnerships with industry, academia, and government (at all levels) to deliver what small businesses want and need.

Additionally, SBA incorporates a great amount of stakeholder input into their IT management processes. Keeping in touch with representatives from state and local governments, small businesses and other related organizations, SBA effectively incorporates their feedback and their concerns into the strategic development process.

Establishing partnerships with other organizations, from federal agencies to college programs to private sector organizations and companies, the SBA has been successful in developing far more comprehensive and valuable information resources and services for its own constituents.

The SBA works extensively with the states to try to provide one-stop information for people and businesses all over the country. Creating common interfaces and portals could potentially save states millions of dollars per year in development costs of their own.

Ongoing Challenges and Lessons Learned:

One of the difficulties that the SBA has encountered in developing and implementing its e-Government and IT initiatives is in integrating the architecture and development process with those of other agencies and organizations. Common architectures and applications are still a great challenge across the government.

Working Cross-Boundaries — Working with state governments and other organizations outside of the federal government presents the challenge of developing and gathering standardized data – information and applications that can be integrated with the rest of the program. Using the cross-agency and intergovernmental best practices as models, the SBA has been working with the states, and the states thus far are responding positively as they see the long-term benefits of participating in the programs.

Security and Privacy – Another challenge that the SBA is working with is providing a high degree of security for all types of business transactions or interactions. Developing a public key infrastructure (PKI) and conducting rigorous risk analysis, the agency is working to ensure that any and all interactions between businesses and the e-Government initiatives are secure.

Case Study 29

Social Security Administration

Mission:

Promotes the economic security of the nation's people through compassionate and vigilant leadership in shaping and managing America's social security programs"

e-Gov Initiative:

Non-specific

Clientele:

Government to Citizen, with SSA e-Government programs providing information and services related to Social Security benefits.

Function:

Benefits Management, Information Distribution, Direct Service/Product Delivery

Description:

The Social Security Administration has developed a lifecycle approach to new IT programs and initiatives aimed at streamlining internal processes and providing more efficient and better services to SSA customers. By analyzing existing transactions, managers and agency leaders have determined which transactions and processes should be web-enabled to make them more effective.

The SSA has achieved a degree of success in applying IT and e-government initiatives to support their mission. Both the initiative that enables citizens to replace Medicare cards, and the initiative that provides customers' benefits and earning records online were successful, enabling citizens to interact with the agency in valuable new ways, and creating a starting point for the SSA to develop its overarching e-government strategy.

Success Factors:

The Social Security Administration incorporates a great deal of stakeholder input into the design and implementation of the online services. Using focus groups and developing an advanced Usability Center for prototype demonstrations, the Agency gleans a great amount of specific user feedback in order to develop a more effective and usable application. Determining how users react to the screen, and what screens and interactions cause confusion, the SSA has utilized – and continues to utilize – stakeholder input to create citizen-focused IT applications.

As part of the project lifecycle approach, the SSA conducts rigorous risk assessment in order to mitigate potential problems as much as possible and maximize the chances for success.

The Social Security Administration has developed effective partnerships with other federal agencies, as well as state and local governments, in order to integrate information and services. This collaboration creates a valuable government to government business process which results in an efficient, money-saving process for all the participants. For example, by participating in an information-sharing partnership, a state can ensure that they do not provide benefits to people who are not eligible, saving the states considerable sums of money.

As a result of existing legislation and standardized documents and forms such as the tax forms, achieving a high level of electronic communication with many partners is easier to achieve.

Additionally, in developing the e-Vital initiative, SSA is working closely with partnering states to co-develop interfaces. The federal government is partially funding the state sites so there will be a common look and standardized approach. States, however, are at very different levels of maturity with their processes – some states are still paper-based, while others have more advanced electronic transaction applications. SSA is working with the more advanced states first to develop the working model, very similar to the approach of the Small Business Administration as they too develop working partnerships with local governments.

When in place, the e-Vital initiative will provide both states and the SSA much faster access to valuable information. For example, currently it can take 170 days to process and receive a death certificate, but with the on-line system it is anticipated it will require only 5 days.

The first pilot of this initiative was with the state of Colorado.

Ongoing Challenges and Lessons Learned:

One of the early lessons learned was to establish a committee on privacy concerns and standards, particularly when working with multiple partners, in order to establish clear outlines and address any concerns and challenges. In many cases, the federal government has a different, more stringent set of standards for privacy than do the private sector, creating the potential for conflicts.

Additionally, it is important to keep the initiative stakeholders involved in the privacy discussion to ensure that their concerns are properly addressed and incorporated. Ongoing stakeholder participation ensures that the end product is a truly citizen- centered effort.

The SSA also manages the ongoing challenge of providing IT security and incorporating it into their e-government initiatives and strategy. Using passwords and pin numbers, the agency already is providing a degree of security for transactions made through the Internet, and managers are working to develop a more robust public key infrastructure (PKI).

The SSA is anticipating the electronic signature and e-authentication process to be made available across the government to support a whole new level of online transactions and interactions.

Another ongoing challenge is that much of the Social Security Administration constituency, at the present time, is not computer savvy, or else does not have reliable access to technology and the Internet. Many older and disabled Americans do not have experience with computers or access to online technologies, and these sectors of the population are the primary interest groups of the SSA. In time, more and more seniors will have developed computer skills, and more disabled citizens will have access to computers and other technology. In the meantime, outreach efforts are aimed at increasing levels of involvement and achieving higher percentages of usage.

The Office of the Chief Information Officer position at Social Security Administration has recently been redefined to play a greater role in managing information technology for the Agency. The CIO develops the Information Resource Management plan and defines the IT vision and strategy for the Agency, as well as managing the IT budget.

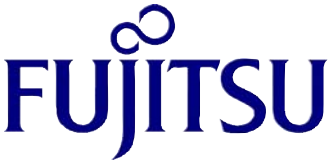
Appendix B
Project Sponsors

The Performance Institute

The Performance Institute is a private think tank that serves as the nation's leading authority and repository on performance-based management practices for government -organizations. Our mission is to identify, study and disseminate the leading management innovations pioneered by "best-in-class" organizations.

Through its national conferences on pressing issues, interactive executive training programs, best practice research and strategic consulting services, the Institute provides cutting-edge expertise in the design, implementation and evaluation of strategies to solve operational challenges and enhance organizational performance.

Reason Public Policy Institute is a public policy think tank promoting choice, competition, and a dynamic market economy as the foundation for human dignity and progress. Reason produces rigorous, peer-reviewed research and directly engages the policy process, seeking strategies that emphasize cooperation, flexibility, local knowledge, and results. Through practical and innovative approaches to complex problems, Reason seeks to change the way people think about issues, and promote policies that allow and encourage individuals and voluntary institutions to flourish. Reason research focuses on education and child welfare, environmental policy, land use and economic development, privatization and government reform, and transportation.



Fujitsu is the world's third largest global IT services company with over 170,000 employees worldwide and an annual revenue of over $38 billion. Fujitsu is a leading provider of customer-focused information technology solutions for the global marketplace. It offers end-to-end solutions and has operations in product design, manufacturing, sales, consulting and service. It delivers local, customer-centric solutions across a broad base of industries — from telecommunications to health to government — in all corners of the world.

The National Academy of Public Administration is an independent, nonpartisan organization chartered by Congress to assist federal, state, and local governments in improving their effectiveness, efficiency, and accountability. For more than 30 years, the Academy has met the challenge of cultivating excellence in public management and administration.
Federal agencies, Congress, state and local governments, and education and philanthropic institutions frequently seek the Academy's assistance in addressing both short-term and long-term challenges—including budgeting and finance, alternative corporate structures, performance measurement, human resources management, information technology, devolution, strategic planning, and managing for results.

Founded in 1983, the nonpartisan, nonprofit Council for Excellence in Government works to improve the performance of government and government's place in the lives and esteem of American citizens.

In working to improve government performance, the Council draws on its unusual strengths as a convener, catalyst, and communicator. Its membership — men and women who have served at the leadership level in both government and the private sector — is a unique resource. Embodying their experience and insight, Council programs bring together individuals, institutions, and ideas in both sectors to help develop creative leadership and management in government and raise the quality of the dialogue between public and private institutions and individual citizens. Programs often employ innovative concepts and methods tested in the corporate arena, translating them into a government context. The Council seeks practical public-sector reform, enabling government at all levels to produce the kinds of results that Americans increasingly demand.

The Progressive Policy Institute is a catalyst for political change. Its mission is to modernize progressive politics and government for the Information Age. Leaving behind the stale left-right debates of the industrial era, PPI is a prolific source of "Third Way" thinking that is shaping the emerging politics of the 21st century.

PPI's mission is to define and promote a new progressive politics for America in the 21st century. Through its research, policies, and perspectives, the Institute is fashioning a new governing philosophy and an agenda for public innovation geared to the Information Age.

PPI's mission arises from the belief that America is ill-served by an obsolete left-right debate that is out of step with the powerful forces re-shaping our society and economy. The Institute advocates a philosophy that adapts the progressive tradition in American politics to the realities of the Information Age and points to a "third way" beyond the liberal impulse to defend the bureaucratic status quo and the conservative bid to simply dismantle government. The Institute envisions government as society's servant, not its master — as a catalyst for a broader civic enterprise controlled by and responsive to the needs of citizens and the communities where they live and work.

Advancing Excellence in Public Service

For more than 60 years, the American Society for Public Administration (ASPA) has stood for advancing excellence in public service both throughout the United States and internationally. With a diverse membership of more than 10,000 government and nonprofit administrators, scholars, teachers and students, ASPA is the largest and most prominent professional association in public administration.

ASPA recently partnered with the United Nations (UN) to conduct an e-government survey of UN member states. This work resulted in the publication of a report entitled, "Benchmarking E-Government: A Global Perspective."

The Performance Institute

For More Information, Contact:

The Performance Institute
1515 North Courthouse Road, Suite 600
Arlington, VA 22201
703-894-0481 Fax 703-894-0482

www.performanceweb.org

Transferring Knowledge to Transform Organizations