



U.S. General Services Administration

Information  
Technology



**Strategic  
Business  
Plan**

**FY**  
2010  

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2012

Message  
from the  
Chief  
Information  
Officer



I am pleased to present the GSA Information Technology (IT) Strategic Plan for fiscal years (FY) 2010 through 2012. We have pursued a vision of what GSA should be doing with IT and seek to give that vision value as committed people infuse this plan with energy. This plan is in keeping with our commitment to providing the best and most effective enterprise IT services and solutions across GSA. The Office of the Chief Information Officer (OCIO) along with our IT partners in the Public Buildings Service, the Federal Acquisition Service, and Service and Staff Offices (SSO) are committed to serving our business and program mission.

As we look ahead, we will lead GSA in becoming a “learning organization” that provides advice and direction to our SSOs on new technologies and the use of these technologies to address program and business challenges.

We will provide the tools and infrastructure to support the GSA’s evolution as a learning organization and to deliver effective services to our customers. These tools include governance, training, and fostering of a culture of excellence in our IT workforce.

We will remain compliant with oversight directives and requirements. Being true to our responsibility to ensure taxpayer dollars are spent wisely, we will balance the cost and time spent on these efforts with the need to provide effective, timely solutions to our stakeholders.

These are exciting times, with extensive opportunities to enhance the business of government and to build a more transparent government using technology. The challenges are great and success will be possible only if we all work together to make this a reality.



**Casey Coleman**  
Chief Information Officer



## IT Mission Statement

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We provide high-quality IT solutions and services in support of GSA missions at best value in collaboration with our employees, customers, and stakeholders.

## IT Vision Statement

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Information technology that enables excellence in the business of government.

## IT Strategic Goals

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- Leverage IT to create a dynamic, learning organization that supports excellence in the business of government.
- Provide effective and reliable IT systems and solutions.
- Provide governance and resources that enable the use of technology.
- Provide balanced stewardship of information and technology.

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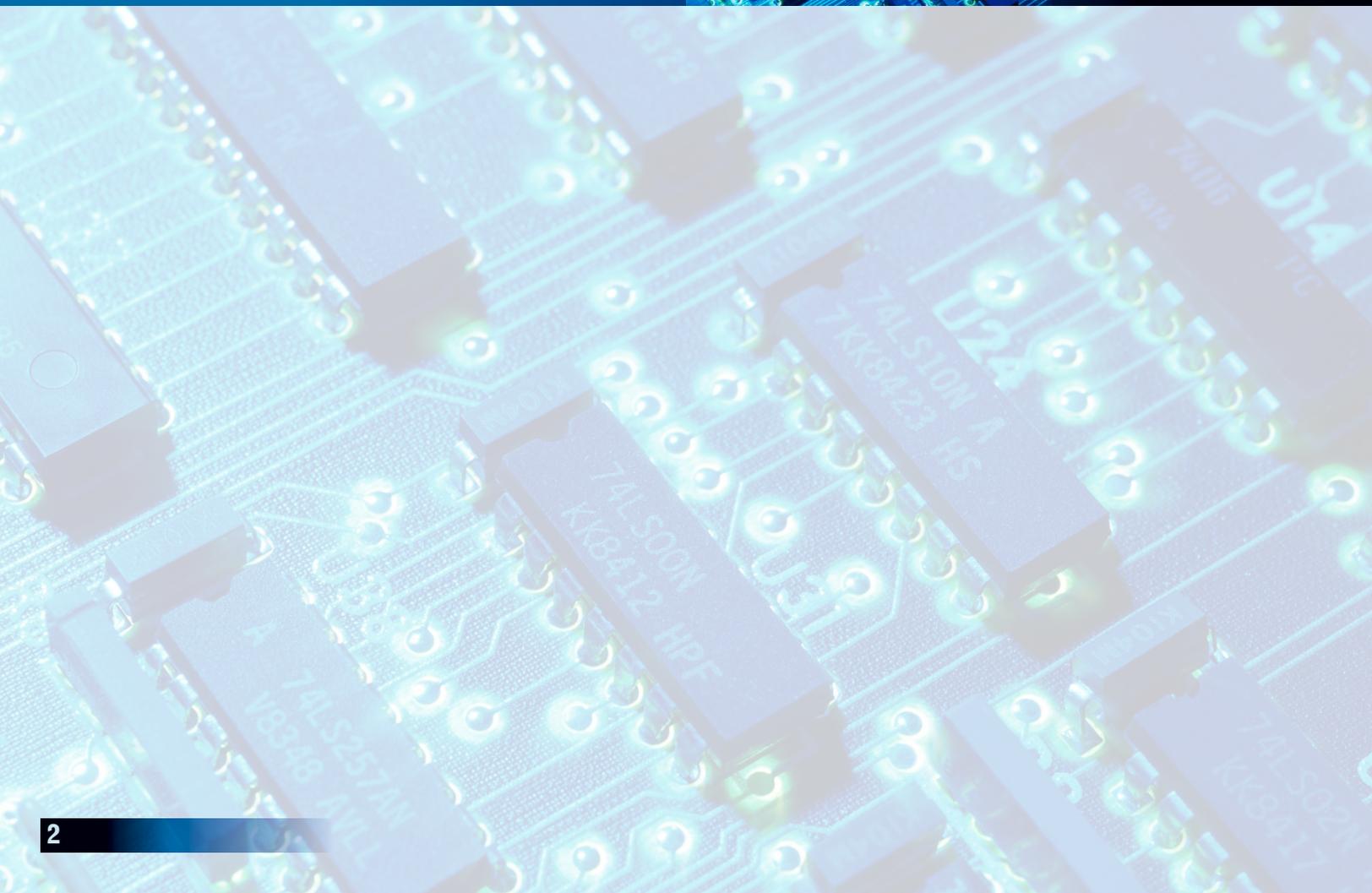
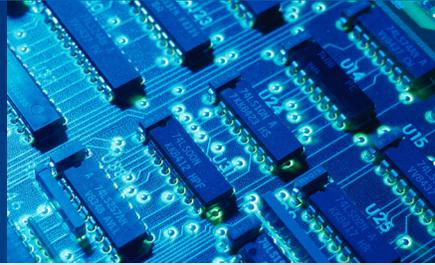
# Information Technology Strategic Business Plan FY10–FY12

*The U.S. General Services Administration (GSA) means excellence in the business of government. From providing workplace solutions to nearly one million federal employees, to creating and developing the award-winning USA.GOV portal, GSA serves to help make government work better for other agencies and the citizens of the United States of America. GSA's mission is to leverage the buying power of the federal government to acquire best value for taxpayers and our federal customers. We exercise responsible asset management. We deliver superior workplaces, high-quality acquisition services, and expert business solutions. We develop innovative and effective management policies.*

*To help GSA accomplish its mission effectively and efficiently, the Office of the Chief Information Officer (OCIO)—in partnership with the information technology (IT) organizations at the Public Buildings Service (PBS), Federal Acquisition Service (FAS), and GSA Staff Offices—ensures that IT services enable responsible asset management and delivery of superior workplaces, acquisition services, and business solutions. The GSA IT community seeks to continually improve IT services at GSA, taking advantage of advances in technology, while working to provide superior IT services. Accordingly, we have developed this IT strategic business plan for FY10–FY12 to guide IT's support of the business of GSA.*

*This is a GSA-wide IT strategic business plan. It represents a One GSA/One Voice strategy for IT services and serves as the collective IT goals of the Service and Staff Offices (SSOs). This plan is intended to enable the planning, decision making, acquisition, and execution of IT services by individual SSOs and business-level program areas.*

# IT Strategic Goals



*To realize its IT mission and vision, GSA has identified four strategic goals that will guide IT over the period of this plan. These goals describe the aspirations of the GSA community as IT personnel perform their mission in support of our core services:*

- *Goal 1: Leverage IT to create a dynamic, learning organization that supports excellence in the business of government*
- *Goal 2: Provide effective and reliable IT systems and solutions*
- *Goal 3: Provide governance and resources that enable the use of technology*
- *Goal 4: Provide balanced stewardship of information and technology.*

*For each goal, several objectives and specific initiatives to be undertaken in FY10–FY12 are identified, along with key performance measures for tracking progress.*

### **Critical Success Factors**

To ensure the achievement of the four strategic goals and their corresponding objectives, the OCIO identified critical success factors. GSA believes the following factors are critical to the delivery of GSA IT services:

- Active and visible senior management support
- Willingness of GSA culture to embrace change
- Effective communication across the organization and with all stakeholders
- Sufficient resources to support initiatives with skilled personnel, funds, and time
- Well-defined and disciplined processes for data capture, stewardship, quality, and accuracy.

### **Environmental Factors**

In recent years, GSA has undergone major organizational changes that directly affect the way IT services are delivered to fulfill its mission. For example, the Federal Supply Service and Federal Technology Service merged to become FAS. The GSA-wide IT infrastructure, once managed locally and with multiple, uncoordinated contracts, service levels, and security controls, was consolidated under the OCIO to create cost efficiencies, allow the Services to focus on application support and development, and support increasing external mandates on security controls.

The Office of Management and Budget's (OMB) e-Government initiatives, emphasis on reuse of IT assets, performance-based contracting, and results-oriented outcomes have also directly affected GSA's IT environment. OMB has additionally created solution specific mandates that impact the operations of IT, such as requiring a common desktop configuration.

The following are some other environmental factors influencing GSA IT services:

- *Presidential initiatives.* GSA is monitoring the administration's emerging technology-related information and related initiatives regarding the intersection of IT and modernized government organizations. Technology initiatives may include the following:
  - Use cutting-edge technologies to create a new level of transparency, accountability, and participation for America's citizens.
  - Use technology to reform government and improve the exchange of information between the federal government and citizens while ensuring the security of our networks.

- Work toward true broadband in every community in America through a combination of reform of the Universal Service Fund; better use of the nation’s wireless spectrum; promotion of next-generation facilities, technologies, and applications; and new tax and loan incentives.
- *Cost management to maximize chosen investments.* Cost management will guide the approaches and activities of managers in both short-run and long-run planning and decision making as the IT staff works to increase the value of GSA solutions for customers.
- *Usability.* IT users want easy access to systems and data. Although data are sometimes pushed to users, users more often pull data when needed. GSA is exploring what “look-and-feel” is presented to users and how identity management will be best incorporated to improve user access.
- *Cloud Computing.* GSA is exploring this type of computing in which dynamically scalable, virtual resources are delivered as a service over the Internet. Users need not have knowledge of, expertise in, or control over the technology infrastructure “in the cloud” that supports them[8]

### **Goal 1: Leverage IT to Create a Dynamic, Learning Organization that Supports Excellence in the Business of Government**

The OCIO and its IT partners provide organizational leadership regarding new technologies that are robust, scalable, and customer oriented. Our workforce will provide thought leadership regarding the use of currently available and emerging technologies to transform how GSA carries out its responsibilities. We will lead the transformation to an organization that systematically learns from experience to increase innovation, effectiveness, and performance. The OCIO and the GSA IT community will promote collaboration and communication with customers to understand how technology can best support their needs.

#### **BENEFITS TO THE GSA COMMUNITY**

The strategic use of technology to provide better services will continue to be a vital strategy to improving the way government serves its citizens. Openly sharing knowledge, best practices, and lessons learned will provide fundamental cost savings and provide the ability to satisfy user requirements. By partnering in the investigation of opportunities and risks, GSA can conduct trade-off analyses to allow for more rapid solution development—leading the transformation to an organization that systematically learns from experience to increase innovation, effectiveness, and performance.

## OBJECTIVES AND INITIATIVES

The following objectives support the achievement of this goal:

- Enhance the skills and knowledge of the GSA workforce by fostering collaboration and communication through IT enabled solutions
- Identify and understand the needs of our internal and external customers by collaborating with them regarding available and new technologies
- Invest in the GSA IT workforce to maintain and improve knowledge, ability, and skills
- Embrace new technologies and business process change through the strategic application of new and emerging technologies.

Table 1 lists specific initiatives to be undertaken in support of the Goal 1 objectives and indicates when each initiative will be completed.

**Table 1. Goal 1 Initiatives and Completion Date**

Initiative	Description	FY10	FY11	FY12
<b>Initiative 1A</b>	Develop and implement an IT collaboration strategy	X		
<b>Initiative 1B</b>	Develop an IT community of practice and community of interest for GSA's key business and program areas		X	
<b>Initiative 1C</b>	Provide opportunities for IT specialists to stay current with information technology	X		
<b>Initiative 1D</b>	Provide a structured approach to insert new and emerging technologies to enhance GSA's dynamic, learning organization	X		

## KEY PERFORMANCE INDICATORS

GSA will use the following performance measures to track progress toward achieving Goal 1:

- Development of an IT-enabled collaboration strategy
- Increase in the extent to which the IT community is viewed as a change enablers for business and program improvement
- Improve GSA IT workforce skills, knowledge and abilities
- Percent of budget spent on training/development
- Development of a technology insertion program.

## **Goal 2: Provide Effective and Reliable IT Systems and Solutions**

The GSA IT community is dedicated to providing effective systems that meet the needs of stakeholders. We will expand our enterprise architecture to support the upgrade, modernization, or replacement of duplicative or “stove-piped” legacy systems. The IT community will focus on data quality, interoperability, and best-value solutions. We also will increase system usability and accessibility of applications, e.g., through a common look and feel. We recognize that employees and customers require business intelligence to perform decision making.

## BENEFITS TO THE GSA COMMUNITY

Increased system usability and better access to information will allow users to be more productive as they use systems that are more user friendly and have a common, look and feel. For citizens and business, we can better provide transparency of our agency’s operations—providing greater accountability to the citizens we ultimately serve. Business intelligence will improve information for decision making for our federal customers by providing the right information at the right time allowing GSA to become a stronger business partner.

## OBJECTIVES AND INITIATIVES

The following objectives support the achievement of this goal:

- Modernize GSA applications, systems, and solution to increase effectiveness and usability
- Increase agility, modularity, and reuse of systems using open standards and modular architecture to enable more rapid deployment of GSA IT capabilities such as service oriented architecture (SOA)

- Develop a common support solution for GSA acquisitions to improve organizational effectiveness through process standardization and a unified approach for acquisition professionals
- Improve data management within and among systems to support decision making
- Improve usability and accessibility of applications, e.g., through a common look and feel
- Create a transparent organization that provides reasonable access to organizational information to citizens.

Table 2 lists specific initiatives to be undertaken in support of the Goal 2 objectives and indicates when each initiative will be completed.

**Table 2. Goal 2 Initiatives and Completion Date**

Initiative	Description	FY10	FY11	FY12
<b>Initiative 2A</b>	Develop and measure the effectiveness and usability of GSA systems	X		
<b>Initiative 2B</b>	Develop and manage Service Oriented Architecture and open architecture		X	
<b>Initiative 2C</b>	Develop common services for the GSA acquisition business processes		X	
<b>Initiative 2D</b>	Establish standards for interoperability and interfaces		X	
<b>Initiative 2E</b>	Improve open access of GSA information and data to citizens and businesses	X		

#### KEY PERFORMANCE INDICATORS

GSA will use the following performance measures to track progress toward achieving Goal 2:

- Development of usability assessment methodology
- Existence of common user interface
- Increase in usability of GSA systems for GSA employees, customers, and citizens

- Publication of information access policy
- Increase in implementation and use of open architecture and service oriented architecture
- Average age of GSA applications
- Number of documented open standards
- Increase in the number of interoperability and standard interfaces successfully implemented throughout customer project life cycles
- Increase in access to information by citizens and businesses to GSA information.

### **Goal 3: Provide Governance and Resources that Enable the Use of Technology**

The GSA IT community will provide and enhance the foundation that supports GSA IT requirements. We are developing a standard set of core services to support business-specific applications. This foundation includes the IT governance structure, a skilled workforce, and the technology infrastructure. We will promote clarity in the IT decision-making process through communication and alignment with agency decision processes.

#### **BENEFITSTOTHE GSA COMMUNITY**

GSA customers, stakeholders, and business leaders benefit from increased understanding and use of the IT governance process. By structuring how and when decisions will be made regarding IT, resources and services can be optimized (e.g., avoiding duplicative solutions) for GSA to support its mission.

#### **OBJECTIVES AND INITIATIVES**

The following objectives support the achievement of this goal:

- Develop and implement an IT human capital plan to ensure that GSA has the right people, with the right skill set to support our mission needs
- Create new contract vehicles to optimize use of GSA time and resources to support IT investments
- Mature the consolidation of infrastructure support services and improve customer service
- Create a data management strategy to improve stewardship of information
- Optimize GSA data center usage with a focus on reducing the overall footprint, maximizing efficiency and effectiveness of operations and managing associated risks
- Improve the GSA IT governance process, ensuring an IT decision-making process that

optimizes IT investments and aligns decision-making processes and accountability activities at every level of GSA.

Table 3 lists specific initiatives to be undertaken in support of the Goal 3 objectives and indicates when each initiative will be completed.

**Table 3. Goal 3 Initiatives and Completion Date**

Initiative	Description	FY10	FY11	FY12
<b>Initiative 3A</b>	Develop and implement an IT human capital plan	X		
<b>Initiative 3B</b>	Provide standard IT contracts for ordering common products and services		X	
<b>Initiative 3C</b>	Establish a data management strategy and methodology		X	
<b>Initiative 3D</b>	Optimize data center usage.		X	
<b>Initiative 3E</b>	Improve the integration among IT strategic planning, enterprise architecture and portfolio management through GSA IT governance processes	X		

**KEY PERFORMANCE INDICATORS**

- GSA will use the following performance measures to track progress toward achieving Goal 3:
- Publication of the IT Human Capital Plan
- Increase in the availability of standard GSA-wide IT contracts for ordering common products and services
- Number of standard IT contracts in use

- Establishment of data management strategy and methodology which will serve customers throughout the agency
- Increase in savings and effectiveness related to the optimization of data center operations
- Number of data centers
- Improvement of stakeholder satisfaction with the integration of IT governance among SSOs. Eliminate duplication and streamline the planning processes throughout the agency.

#### **Goal 4: Provide Balanced Stewardship of Information and Technology**

GSA must comply with a variety of policies and regulations regarding IT systems, processes, and infrastructure. OMB drives many of these mandates and includes such requirements as laptop encryption, two factor authentication, and the Federal Desktop Core Configuration (FDCC). The cost and time spent on these efforts must be balanced with the overall efforts to provide effective systems to stakeholders in a timely manner. We are working to increase compliance our level of support, while managing the impacts on our end users through change management and communication initiatives.

#### **BENEFITSTOTHE GSA COMMUNITY**

GSA with its responsibility as a federal agency must comply with external mandates. By taking a balanced approach, we will include customer and stakeholder needs as a central part of solution development. Some mandates, like identity and access management, will unify management of system access by limiting the need for multiple system identifications and passwords while at the same time enhancing the overall security posture of the GSA IT. This example of creating a win-win environment for mandates exemplifies the desired behavior associated with this goal.

#### **OBJECTIVES AND INITIATIVES**

The following objectives support the achievement of this goal:

- Ensure a reliable, secure, sustainable, and green infrastructure to support GSA's mission, priorities, accomplishments, and growth
- Provide an identity access management solution that incorporates secure and compliant technology
- Begin implementation of an agency-wide continuity plan

- Improve accessibility of applications for people with disabilities (e.g., Section 508 compliance).

Table 4 lists specific initiatives to be undertaken in support of the Goal 4 objectives and indicates when each initiative will be completed.

**Table 4. Goal 4 Initiatives and Completion Date**

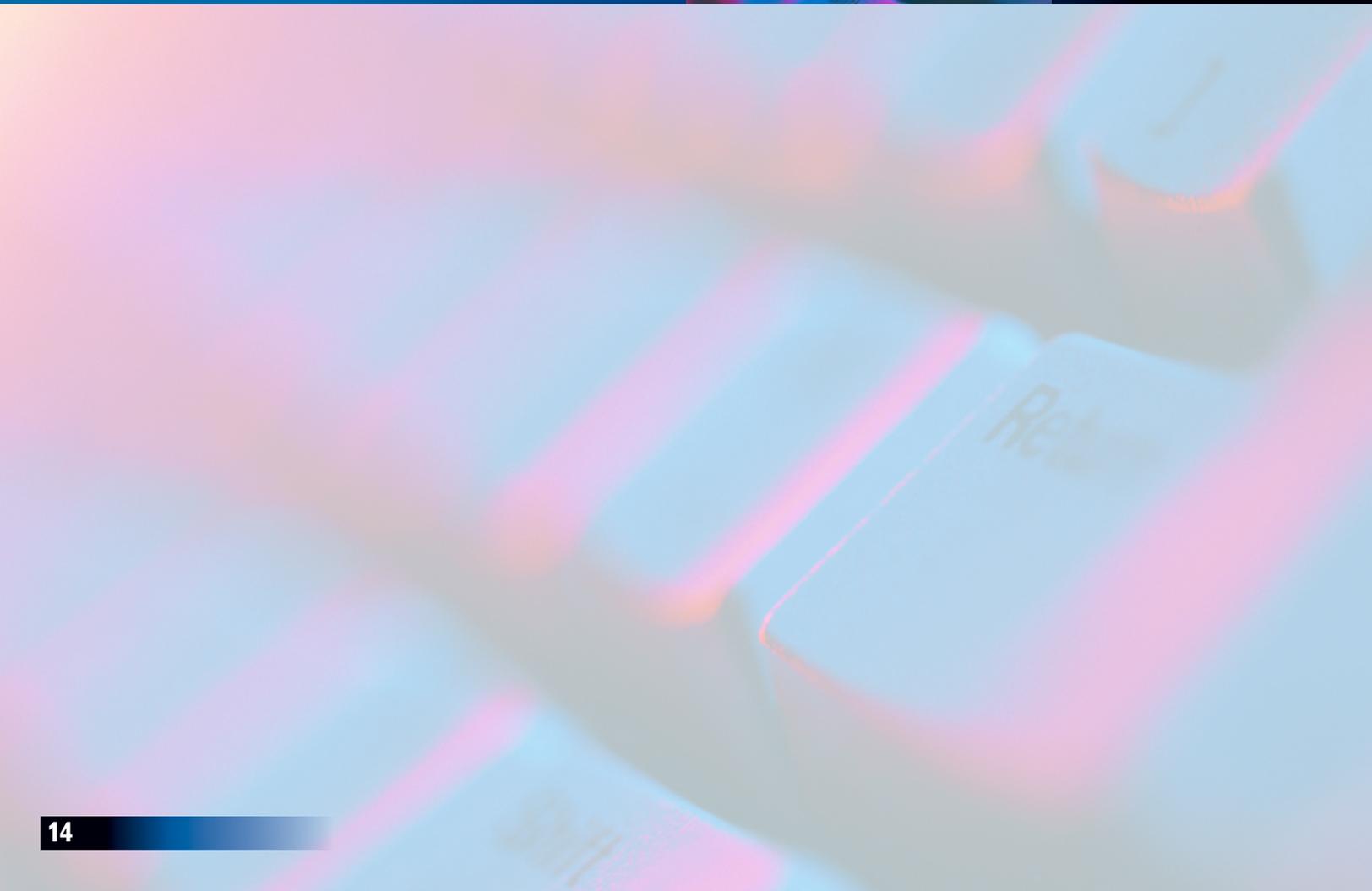
<b>Initiative</b>	<b>Description</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>
<b>Initiative 4A</b>	Mature GSA's Section 508 program and conformance to the standard for people with disabilities	X		
<b>Initiative 4B</b>	Implement identity and access management as an infrastructure service, including single sign-on, provisioning, authentication, and logical access control using Homeland Security Presidential Directive (HSPD)-12 credentials	X		
<b>Initiative 4C</b>	Enhance GSA's continuity plan for IT operations and agency support		X	
<b>Initiative 4D</b>	Monitor and comply with infrastructure related requirements, e.g. two factor authentication and Federal Desktop Core Configuration	X		
<b>Initiative 4E</b>	Develop a Green IT strategy and policy	X		

## KEY PERFORMANCE INDICATORS

GSA will use the following performance measures to track progress toward achieving Goal 4:

- Increase in identity access capability for employees and reduce system sign on requirements
- Deployment of identity management access solution with single sign on
- Percent of applications compatible with single sign on
- Approval of enhanced IT infrastructure continuity plan guidance
- Increase in compliance with external mandates
- Number of Section 508 compliant initiatives
- Percent of applications that are 508 compliant
- Completion of Green IT strategy and policy

# Governance and Goal Owners



*The goal owners will work within the GSA IT governance process to achieve the strategic goals. IT governance specifies the decision rights and accountability framework to encourage desirable behavior in the use of IT. The process is appropriate for enterprise-wide functions and also supports SSO level IT operations and management decisions as appropriate.*

*The governance structure facilitates a partnership between the OCIO and SSOs. The Business System Council reviews, approves, and makes final decisions on matters related to the intersection of GSA's strategy, business and technology. The IT Executive Council (ITEC) reviews, makes decisions and recommendations on agency-wide technical issues and the strategic use of IT. The ITEC sponsors five standing committees for which it has oversight responsibility. It may add or terminate committees or task forces based on specific needs or requirements. These councils and committees will ensure that the IT portfolio is managed with appropriate oversight.*

Table 5 identifies the owners, or primary sponsors, of each IT strategic goal. These owners will monitor their assigned goals and report quarterly to the ITEC. The following are other responsibilities of the goal owners:

- Update their respective IT strategic plans
- Finalize initiatives and associated projects and performance measures.

**Table 5. Goal Owners**

Goal	Primary sponsors
1. Leverage IT to create a dynamic, learning organization that supports excellence in the business of government	OCIO, OCHCO, PBS, FAS
2. Provide effective and reliable IT systems and solutions	OCIO, PBS, FAS
3. Provide governance and resources that enable the use of technology	OCIO, OCHCO, PBS, FAS
4. Provide balanced stewardship of information and technology	OCIO, OCFO, OCAO, OCHCO, PBS, FAS

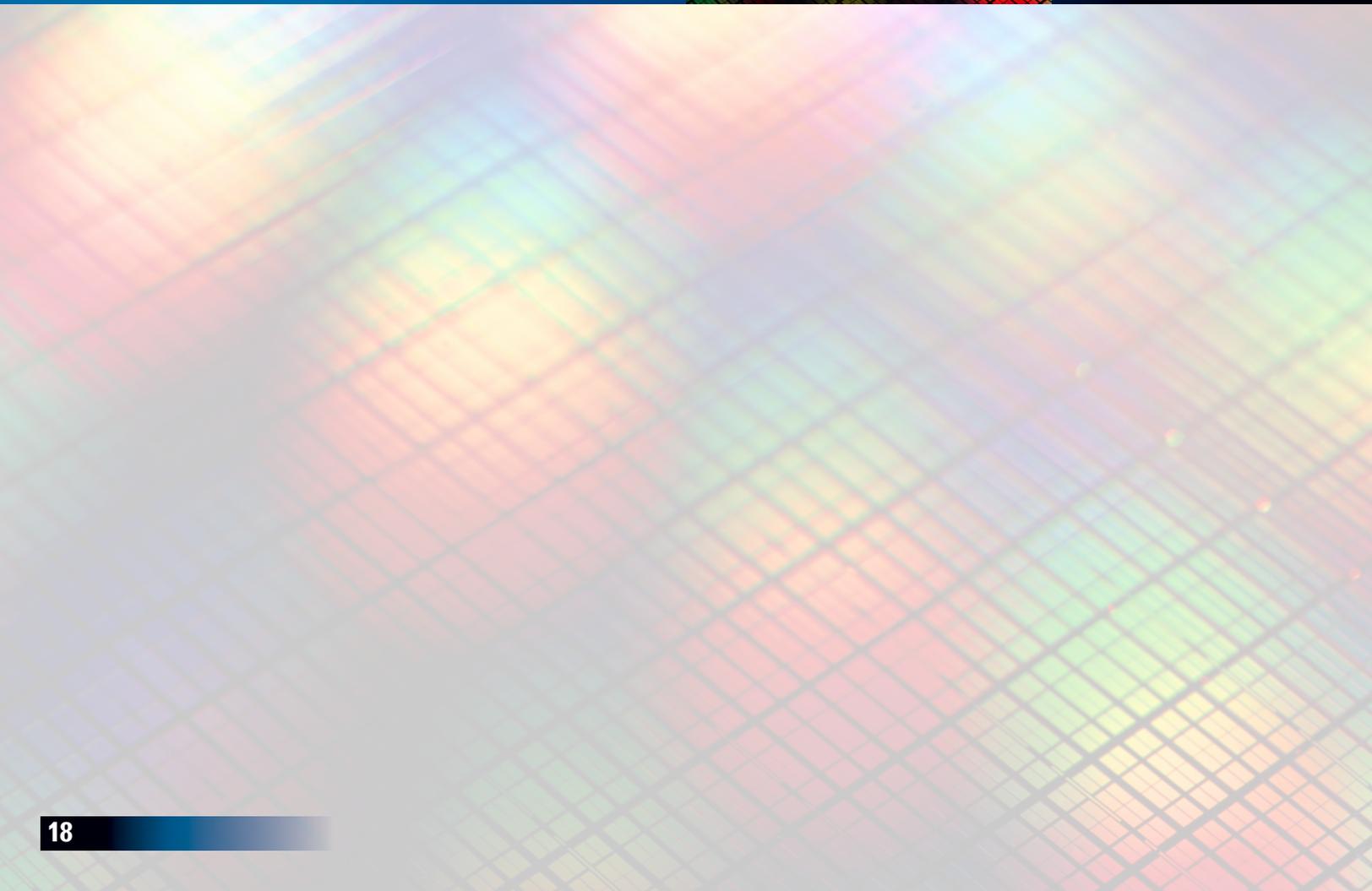
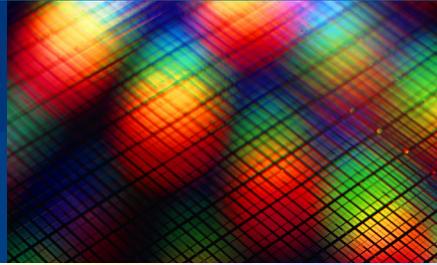
Table 6 identifies the leads for each initiative.

**Table 6. Initiative Leads**

Initiative	Description	Lead
<b>Initiative 1A</b>	Develop and implement an IT collaboration strategy	OCIO CTO and OCSC
<b>Initiative 1B</b>	Develop a community of practice and community of interest for GSA's key business and program areas	Each SSO
<b>Initiative 1C</b>	Provide opportunities for IT specialists to stay current with information technology	OCHCO
<b>Initiative 1D</b>	Provide a structured approach to insert new and emerging technologies to enhance GSA's dynamic, learning organization.	OCIO
<b>Initiative 2A</b>	Develop criteria and methodology to measure the effectiveness and usability of GSA systems	OCIO CTO
<b>Initiative 2B</b>	Manage and increase use of Service Oriented Architecture and open architecture	OCIO CTO

<b>Initiative</b>	<b>Description</b>	<b>Lead</b>
<b>Initiative 2C</b>	Develop common services for the GSA acquisition business processes	OCAO
<b>Initiative 2D</b>	Establish standards for interoperability and interfaces	OCFO
<b>Initiative 2E</b>	Improve open access of GSA information and data to citizens and businesses	OCSC, OCAO
<b>Initiative 3A</b>	Develop and implement an IT human capital plan	OCIO
<b>Initiative 3B</b>	Provide standard IT contracts for ordering common products and services	OMS
<b>Initiative 3C</b>	Establish a data management strategy and methodology	OCFO
<b>Initiative 3D</b>	Optimize data center usage.	PBS and OCIO
<b>Initiative 3E</b>	Improve the integration among IT strategic planning, enterprise architecture and portfolio management through GSA IT governance processes	OCIO
<b>Initiative 4A</b>	Mature GSA's Section 508 program and conformance to the standard for people with disabilities	OCIO
<b>Initiative 4B</b>	Implement identity and access management as an infrastructure service, including single sign-on, provisioning, authentication, and logical access control using HSPD-12 credentials	OCIO CTO
<b>Initiative 4C</b>	Enhance GSA's continuity plan for IT operations and agency support	OERR
<b>Initiative 4D</b>	Monitor and comply with infrastructure related requirements, e.g. two factor authentication and Federal Desktop Core Configuration	OCIO
<b>Initiative 4E</b>	Develop a Green IT strategy and policy	PBS

# Strategic Planning Milestones



GSA uses an iterative strategic planning, budgeting, and performance management process for programmatic and IT decisions. This process helps management prioritize business needs that drive the IT portfolio composition. . Figure 1 shows how the IT planning functions: enterprise architecture (including government-wide initiatives), capital planning and investment control (CPIC), and IT strategic planning work together to develop a business-driven IT portfolio.

**Figure 1. Line of Sight from Strategic Direction to Programs and Projects**

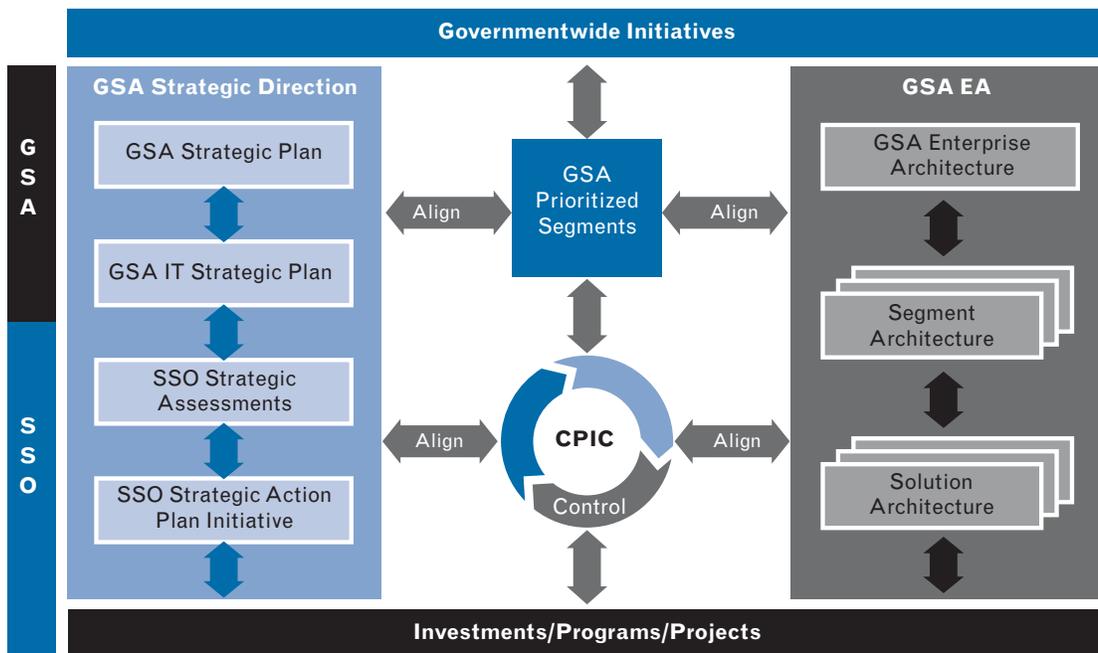
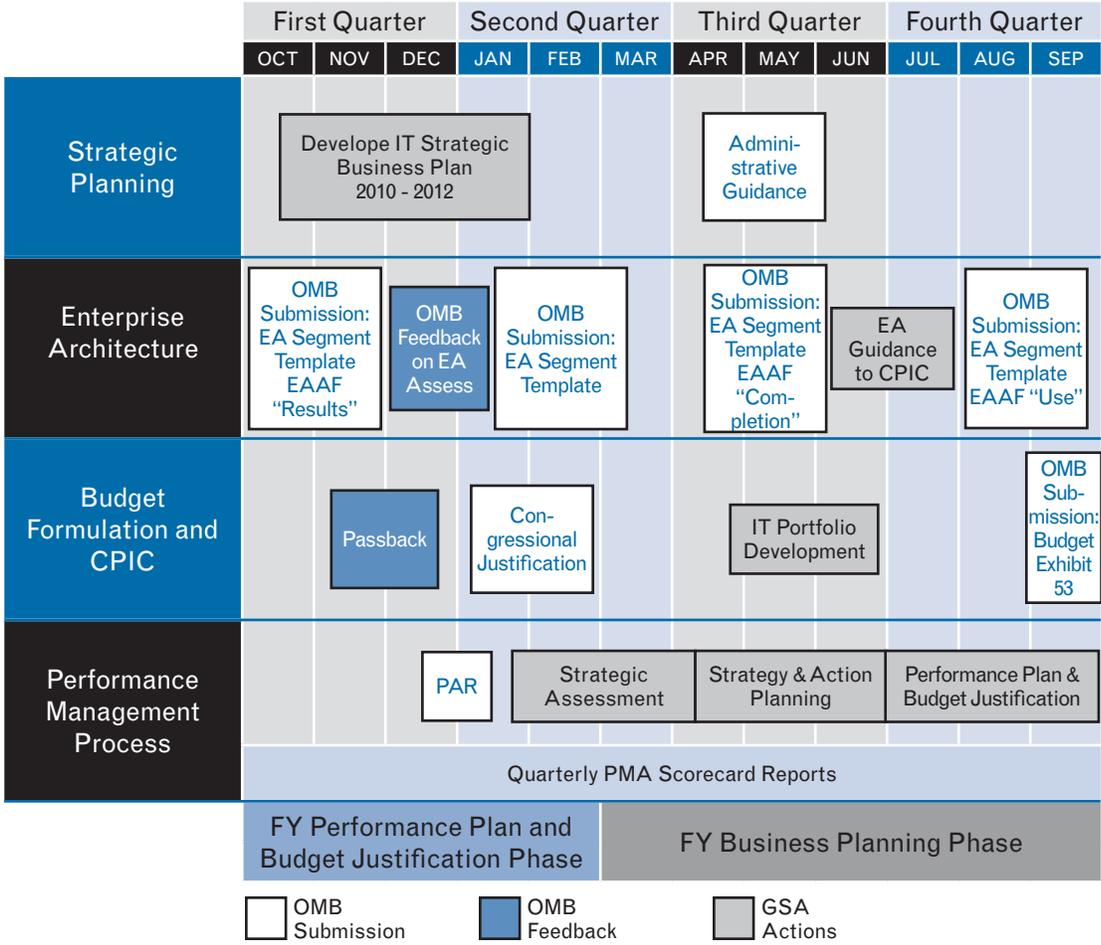


Figure 2 depicts the tactical and calendar-driven milestones for implementing the IT Strategic Business Plan using the iterative strategic planning, budgeting, and performance management process.





# Appendix



## APPENDIX A

### PLAN DEVELOPMENT

*The GSA IT strategic business plan is the responsibility of the OCIO in partnership with GSA's SSO IT organizations. This partnership, formalized in GSA's IT governance structure and Information Technology Executive Council (ITEC), provides the mechanism for the OCIO, SSOs, and regions to collaboratively explore and identify actions that GSA must take in the area of IT to ensure that decisions are based on real business priorities and needs.*

Using the strategic planning process as a catalyst for change, the OCIO developed an approach that solicited input from the SSOs to produce the FY10–FY12 IT strategic business plan for agency-wide IT services. The SSOs that participated in the process were FAS, PBS, OCAO, OCFO, OCHCO, Office of Citizen Services and Communications (OCSC), and Office of Government-wide Policy.

The plan was developed through an integrated three-phase approach, shown in Figure A-1.

**Figure A-1. Assessment Approach**

Situation Assessment	Strategic Direction	Implementation Plan
<ul style="list-style-type: none"><li>• Strengths</li><li>• Weaknesses</li><li>• Opportunities</li><li>• Threats</li><li>• Emerging trends</li><li>• Common themes</li><li>• Recommendations</li></ul>	<ul style="list-style-type: none"><li>• Mission</li><li>• Vision</li><li>• Goals</li><li>• Objectives</li><li>• Initiatives</li><li>• Emerging trends</li><li>• Common themes</li><li>• Recommendations</li></ul>	<ul style="list-style-type: none"><li>• Objectives</li><li>• Initiatives</li><li>• Measures</li><li>• Owners</li><li>• Timelines</li><li>• Governance</li><li>• Critical Success Factors</li></ul>
<i>How:</i> Interviews + Analysis	<i>How:</i> Workshop + Analysis	<i>How:</i> Collaborate + Validate

During the situation assessment, the planning facilitators reviewed background information such as related strategic plans and documentation on emerging IT trends. To supplement this information, the team interviewed approximately 15 stakeholders, including members of the Information Technology Council and the PBS and FAS CIO staffs. The focus in the interviews was to understand strengths, weaknesses, opportunities, and threats (SWOT) that may affect IT services at GSA through FY12. Interviewers also gathered input on barriers, critical success factors, and goals. The team analyzed the output of the interviews and presented the results at a 1-day planning workshop that included participants from the OCIO and SSO senior IT managers. During the workshop, the OCIO team worked with OCIO and SSO personnel to refine the set of goals and corresponding objectives that will support GSA's IT mission. The implementation plan was then built to support the achievement of these goals and objectives.

## APPENDIX B

### CURRENT GSA IT ENVIRONMENT

*This appendix identifies aspects of the current GSA IT environment—strengths, weaknesses, opportunities, and threats; and emerging trends—that helped shape GSA’s IT strategy.*

#### **Strengths, Weaknesses, Opportunities, and Threats**

The planning team conducted a SWOT analysis of IT services at the enterprise level. Figure B-1 shows the results.

**Figure B-1. SWOT Analysis Results for IT Services**

<b>Strengths</b>	<b>Weaknesses</b>
<p>We have a:</p> <ul style="list-style-type: none"><li>• Reliable infrastructure that can support innovation, uniformity, and standardization</li><li>• Level of trust among staffs, which enhances our ability to accomplish work</li><li>• Skilled workforce with a high level of knowledge about our applications</li><li>• Portfolio management process</li></ul>	<p>We have:</p> <ul style="list-style-type: none"><li>• Decentralized organization with silos that prevent us from leveraging commonalities</li><li>• Decoupled services, requiring users to go several places for support</li><li>• Lack of education about available IT support</li><li>• Lack of interoperability standards for key systems</li><li>• Lack of documentation regarding how we do things</li></ul>

Opportunities	Threats
<p>We could:</p> <ul style="list-style-type: none"> <li>• Replace manual processes with electronic processes</li> <li>• Leverage work of GSA personnel who have developed and worked on applications</li> <li>• Keep moving toward being more agile, e.g., use the SOA concept</li> <li>• Provide easy access to information using both push and pull techniques</li> <li>• Reuse information from legacy systems</li> <li>• Reduce the number of systems and eliminate duplication</li> <li>• Consider different ways of delivering service, such as Voice over Internet Protocol (VoIP), and experiment with doing business a different way</li> <li>• Implement cutting-edge technologies for outreach, collaboration, and social networking</li> <li>• Make the best applications and infrastructure available to improve user efficiency</li> <li>• Become more savvy with business applications for the younger technology user</li> <li>• Improve the on-boarding process for new personnel</li> <li>• Strengthen our workforce mobility capability</li> <li>• Improve our business intelligence capabilities</li> </ul>	<p>We face:</p> <ul style="list-style-type: none"> <li>• Decrease in control of individuals and their ability to be creative if we standardize too much</li> <li>• Duplication of effort because people are “doing their own thing”</li> <li>• Staffing challenges to support new Presidential initiatives as well as initiatives regarding emerging technology trends</li> <li>• Risk of being over bureaucratic and losing agility</li> </ul>

### Emerging Trends

Emerging trends include technology initiatives that are recognized by experts as significant to organizations for use in selecting strategies to improve IT services. We have traced each goal back to specific emerging trends to strengthen this link.

Table B-1 lists 10 emerging trends identified by GSA through internal information gathering and from Gartner research regarding the top 10 strategic technologies for 2009.<sup>3</sup> The table also identifies the challenges related to each trend and the GSA offices that may benefit from this trend.

**Table B-1. Emerging Trends**

Trend	Changes Related to Trend	Affected Offices
<p>Virtualization. Virtualization is a technology that removes the dependency between the operating system software and the underlying hardware. Removing this dependency enables IT organizations to combine computing resources and more effectively use the computing capacity of modern computers. Virtualization allows applications to operate across a common set of hardware rather than have one application operate on only one set of hardware. Virtualization allows IT organizations to run multiple operating systems simultaneously on a single machine.</p>	<p>Virtualization requires data center administrators to develop new skills in performance analysis and tuning. Vendors are developing tools to manage, monitor, and optimize virtualized computing resources. Data center administrators will have to develop skills to use these tools.</p>	<p>PBS, FAS, OCIO, OCFO</p>
<p><b>Cloud computing.</b> Gartner defines cloud computing as “a style of computing that characterizes a model in which providers deliver a variety of IT-enabled capabilities to consumers. The key characteristics of cloud computing are 1) delivery of capabilities as a service, 2) delivery of services in a highly scalable and elastic fashion, 3) using Internet technologies and techniques to develop and deliver the services, and 4) designing for delivery to external customers.”</p>	<p>Administration of a cloud infrastructure implies trained and experienced contractors as well as knowledgeable federal employees closely engaged in administration. Cloud computing also implies a change in an organization’s software programming model.</p>	<p>PBS, FAS, OCFO</p>

<sup>3</sup>See the Gartner website at [http://blogs.gartner.com/david\\_pearley/2008/10/14/gartner%E2%80%99s-top-10-strategic-technologies-for-2009/](http://blogs.gartner.com/david_pearley/2008/10/14/gartner%E2%80%99s-top-10-strategic-technologies-for-2009/).

Trend	Changes Related to Trend	Affected Offices
<p><b>Servers—beyond blades.</b> Servers—beyond blades is the reduction of server hardware into swappable components smaller than blades. Components, also known as resources, include memory, bus, and CPU. Because resources smaller than blades are swappable, replacement of resources only when necessary increases utilization.</p>	<p>The reduction of server hardware into smaller components must be accompanied by more detailed inventory and asset management. Swappable components also require well-defined standardization and hardware validation at install time.</p>	<p>All</p>
<p><b>Web-oriented architecture (WOA).</b> Gartner defines WOA as an “agile, interoperable and scalable service-oriented environment.” WOA is based on W3C’s web design principles, including simplicity, modularity, tolerance, decentralization, test of independent invention, and principle of least power.<sup>a</sup> WOA also implies use of W3C standards such as Resource Description Framework<sup>b</sup> modularity, tolerance, decentralization, test of independent invention, and principle of least power.</p>	<p>WOA requires highly experienced contractors and knowledgeable federal employees. Understanding the Representational State Transfer design of Web Services, the Linked Data or Giant Global Graph vision that leverages the Semantic Web standards, and corresponding browser-based Rich Internet Application techniques and technologies are new to GSA application development and delivery practices. In addition, they present a variety of new challenges, such as those related to security.</p>	<p>OCIO, OCSC</p>
<p><b>Enterprise mashups.</b> Enterprise mashups are the repurposing of assets into a new form (mashups) as enterprise-class systems. Well-defined interfaces and interoperability are implicit in mashups as well as the presumed value of what is gained by combining the separate assets.</p>	<p>Because existing assets were planned and implemented separately, the cost to combine the assets can be as high as recreating them.</p>	<p>OCIO, OCSC</p>

Note: W3C = World Wide Web Consortium.

<sup>a</sup> See the W3C site at <http://www.w3.org/DesignIssues/Principles.html>.

<sup>b</sup> See the W3C site at <http://www.w3.org/RDF/>.

Trend	Changes Related to Trend	Affected Offices
<p><b>Specialized systems.</b> Specialized systems embed the functions of object-oriented middleware such as content and message routing into custom routers and blades to increase throughput that cannot be achieved with off-the-shelf middleware.</p>	<p>Internally, technical evaluation boards should develop an awareness of the significance of specialized systems to achieve acceptable performance in SOA projects. Externally, GSA's customers such as the Department of Defense are highly dependent on specialized systems</p>	<p>All</p>
<p><b>Social software and social networking.</b> Social software has been defined as software that "adapts to its environment, instead of requiring its environment to adapt to the software."<sup>c</sup> Social networking is a behavior in which the participants establish relationships across levels of a hierarchy, forming communities and collectives based on individual perception of value, rather than based on imposed organizational structures.</p>	<p>The current focus on social software and social media implies significant changes to governance, work habits, and acceptable behavior that cross three generations: Baby-Boom; Generation X, and Millennial.</p>	<p>PBS, FAS, OCIO, OCSC, OCHCO</p>
<p><b>Unified communications.</b> Unified communications is the use of software to enhance productivity through crossing traditional communications boundaries. The computer starts to work like a phone. An iPod provides podcasts and voicemail shows up in an email inbox as a digital record.</p>	<p>Progress is slow. As above, federal agencies are evaluating best practices and developing pilot projects.</p>	<p>All</p>

<sup>c</sup> See the SocialText site at [http://www.socialtext.net/ssa/index.cgi?definition\\_discussions\\_elsewhere](http://www.socialtext.net/ssa/index.cgi?definition_discussions_elsewhere).

Trend	Changes Related to Trend	Affected Offices
<p><b>Business intelligence.</b> Business intelligence is the use of timely and accurate information to inform financial and operational decisions. The 2007 acquisition of Inxight by Business Objects indicates that leading providers are extending business intelligence into text analytics of “fact and entity extraction, taxonomy creation, and visualization. These products support the analysis and understanding of relationships, trends, timelines, and patterns that would go otherwise undetected.”<sup>d</sup></p>	<p>GSA will need to weigh the expected benefits from business intelligence against the cost to implement it within GSA’s legacy environment. Effective business intelligence depends on the quality of underlying data, so the recently launched data quality efforts are key to successful implementation of business intelligence.</p>	<p>OCFO, FAS, PBS, OCAO, OCHCO</p>
<p><b>Green IT.</b> Green IT is the planning and adoption of environmentally sustainable information and communications technologies as well as the reuse, recycling, and disposal of materials used in their manufacture.</p>	<p>Green IT requires the development of an accurate baseline and incremental measures of cost savings as well as the effective enforcement of policies.</p>	<p>All</p>

<sup>d</sup> See the Palo Alto Research Center site at <http://www.parc.com/about/pressroom/news/2007-05-22-inxight.html>.

## APPENDIX C

### MAPPING OF GSA IT STRATEGIC BUSINESS GOALS

*The GSA IT strategic business plan for FY10–FY12 aligns with the GSA strategic plan for FY07–FY12 and with the FY08–FY09 strategic plan of the Federal Chief Information Officers Council.*

*This appendix maps those plans to the four GSA IT strategic goals:*

- *Goal 1: Leverage IT to create a dynamic, learning organization that supports excellence in the business of government*
- *Goal 2: Provide effective and reliable IT systems and solutions*
- *Goal 3: Provide governance and resources that enable the use of technology*
- *Goal 4: Provide balanced stewardship of information and technology.*

*This appendix also maps emerging trends and SWOT factors to the GSA IT strategic goals. The purpose of those mappings is to demonstrate that the IT strategic business plan addresses the realities of the current IT environment at GSA.*

Table C-1 maps the GSA IT goals to the GSA strategic plan.

**Table C-1. Mapping of GSA Agency-Level Goals to GSA IT Goals**

GSA agency-level goals	GSA IT goals
Stewardship	Goals 2 and 4
Superior workplaces	Goals 1, 2, and 3
Best value	Goal 2
Innovation	Goal 1

Table C-2 maps the GSA IT goals to the Federal CIO Council's strategic plan for FY08–FY09.

**Table C-2. Mapping of the Federal CIO Council Strategic Plan to GSA IT Goals**

Federal CIO Council goals	GSA IT goals
Goal 1. A cadre of highly capable IT professionals with the mission-critical competencies needed to meet agency goals	Goals 1 and 3
Goal 2. Relevant information securely, rapidly, and reliably delivered to our stakeholders	Goal 2
Goal 3. Interoperable IT solutions identified and used efficiently and effectively across the federal government	Goal 2
Goal 4. An integrated, accessible federal infrastructure enabling interoperability across Federal Government 2.0 (Gov 2.0) that uses new and emerging collaborative technologies to enable more streamlined information exchange with key external and internal stakeholders, in particular the American public	Goals 2 and 4

Table C-3 maps the IT goals to the emerging trends.

**Table C-3. Mapping of Emerging Trends to GSA IT Goals**

Emerging trend	GSA IT goals
Virtualization	Goals 1 and 2
Cloud computing	Goals 1 and 2
Servers—beyond blades	Goals 1, 2, and 3
Web-oriented architectures	Goals 2 and 4
Enterprise mashups	Goal 2
Specialized systems	Goals 1 and 2
Social software and social networking	Goals 1, 2, and 3
Unified communications	Goals 1 and 2
Business intelligence	Goals 2, and 3
Green IT	Goals 1, 2, 3 and 4

Table C-4 maps the IT goals to the strengths, weaknesses, opportunities, and threats identified during one-on-one interviews and the strategic planning workshop.

**Table C-4. Mapping of Strengths, Weaknesses, Opportunities, and Threats to GSA IT Goals**

SWOT category	SWOT factor	GSA IT goal
Strengths	Reliable infrastructure that can support innovation, uniformity, and standardization	Goals 2, 3, and 4
	Level of trust among staffs, which enhances our ability to accomplish work	Goal 1
	Skilled workforce with a high level of knowledge about our applications	Goals 1 and 3
	Portfolio management process	Goal 3
Weaknesses	Decentralized organization with silos that prevent us from leveraging commonalities	Goals 1 and 3
	Decoupled services, requiring users to go several places for support	Goal 3
	Lack of education about available IT support	Goal 1
	Lack of interoperability standards for key systems	Goals 2 and 4
	Lack of documentation regarding how we do things	Goal 1

<b>SWOT category</b>	<b>SWOT factor</b>	<b>GSA IT goal</b>
Opportunities	Replace manual processes with electronic processes	Goals 2 and 4
	Leverage work of GSA personnel who have developed and worked on applications	Goal 1
	Keep moving toward being more agile, e.g., use the SOA concept	Goal 2
	Provide easy access to information using both push and pull technologies	Goals 1 and 2
	Reuse information from legacy systems	Goal 2
	Reduce the number of systems and eliminate duplication	Goal 2
	Consider different ways of delivering service (e.g., VoIP) and experiment with doing business a different way	Goal 1
	Implement cutting edge technologies for outreach, collaboration, and social networking.	Goal 1
	Make the best applications and infrastructure available to improve user efficiency	Goals 2, 3, and 4
	Become more savvy with business applications for the younger technology user	Goal 2
	Improve the on-boarding process for new personnel	Goal 3
	Strengthen our workforce mobility capability	Goal 1
	Improve our business intelligence capabilities	Goals 2 and 3

<b>SWOT category</b>	<b>SWOT factor</b>	<b>GSA IT goal</b>
Threats	Decrease in control of individuals and their ability to be creative if we standardize too much	Goal 2
	Duplication of effort because people are "doing their own thing"	Goals 1 and 3
	Availability of staffing resources to support new initiatives in the Presidential administration as well as initiatives regarding emerging technology trends	Goal 1
	Risk of being over bureaucratic and losing agility	Goals 2 and 4

## APPENDIX D

### ABBREVIATIONS

CIO	Chief Information Officer
CPIC	capital planning and investment control
EA	enterprise architecture
EAAF	Enterprise Architecture Assessment Framework
FAS	Federal Acquisition Service
FDCC	Federal Desktop Core Configuration
FY	fiscal year
GSA	General Services Administration
HSPD	Homeland Security Presidential Directive
IT	information technology
ITEC	IT Executive Council
OCAO	Office of the Chief Acquisition Officer
OCFO	Office of the Chief Financial Officer
OCHCO	Office of the Chief Human Capital Officer
OCIO	Office of the Chief Information Officer
OCSC	Office of Citizen Services and Communications
OMB	Office of Management and Budget
PAR	Performance and Accountability Report
PBS	Public Buildings Service
PMA	President's Management Agenda
SOA	service oriented architecture
SSO	Service and Staff Office
SWOT	strengths, weaknesses, opportunities, and threats
VoIP	Voice over Internet Protocol
W3C	World Wide Web Consortium
WOA	web-oriented architecture

## Acknowledgements

*Completing GSA's IT Strategic Business Plan would not have been possible without the help and support of many people. We would like to thank the following GSA staff members for their hard work and dedication during this process.*

James C. Adams, OCIO

Sheldon Andrew, CHCO

Barnaby L. Brasseux, Deputy Administrator

Casey Coleman, CIO

Anthony Costa, PBS

Martha A. Dorris, OCSC

Christopher F. Fornecker, OCAO

Michael K. Harris, FAS

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Edward J. O'Hare, FAS CIO

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Charles E. Popelka, FAS

Tamela L. Riggs, PBS

Robert C. Seay, OCIO

Daryle M. Seckar, OCIO

Teresa D. Sorrenti, OCIO

George Thomas, OCIO

Kathleen M. Turco, CFO

Douglas L. York, PBS





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