

Department of Commerce



Strategic Information Technology Plan 2011-2015

September 2010

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Introduction

The mission of the Department of Commerce (DOC) is to create the conditions for economic growth and opportunity by promoting innovation, entrepreneurship, competitiveness, and stewardship.

To achieve this mission, the Department has established three strategic goals and a management integration goal. Each strategic goal involves activities that touch American lives every day. These strategic goals and the general objectives underlying each of them are stated as:

Goal 1: Provide the information and tools to maximize U.S. competitiveness and enable economic growth for American industries, workers, and consumers.

The objectives of this strategic goal are to enhance economic growth by developing partnerships with private sector and nongovernmental organizations, to advance responsible economic growth and trade while protecting American security, and to enhance the supply of key economic and demographic data to support effective decision making by various DOC stakeholders.

Goal 2: Foster science and technological leadership by protecting intellectual property, enhancing technical standards, and advancing measurement science.

Underlying this strategic goal are the general objectives of developing tools and capabilities that improve the productivity, quality, dissemination, and efficiency of research; the protection of intellectual property and improvement of the patent and trademark system; and the advancement of the development of global e-commerce and enhanced telecommunications and information services.

Goal 3: Observe, protect, and manage the Earth's resources to promote environment stewardship.

The objectives of this strategic goal are to advance understanding and predict changes in the Earth's environment, and to meet America's economic, social, and environmental needs through enhanced conservation and management of coastal and marine resources.

Management Integration Goal: Achieve organizational and management excellence.

This goal, which applies with equal importance to all of our operating units, reflects our commitment to continual improvement in the effectiveness of our organizational management in both public and private settings.

The Department of Commerce is a major Information Technology (IT) organization and successful outcome of its programs is dependent upon effective investment in, and management of, its IT resources. In FY 2010, Commerce spent \$3 billion on IT services that include hardware, software, in-house personnel, and support services. In FY 2011 and 2012, the Department plans to spend \$2.5 billion and \$2.4 billion. As a percentage of total agency expenditures, Commerce ranks among the top agencies in the federal government in IT spending. Our ability to serve our customers and our effective stewardship of public resources depend upon the efficient application of our IT resources to furthering these goals.

This Strategic Information Technology Plan (SITP) is one of a suite of documents that guides the Department of Commerce's Information Technology (IT) planning process. It has been prepared consistent with federal guidance including:

Government Performance and Results Act of 1993 (Public Law 103-62)

Clinger-Cohen Act of 1996 (Divisions D and E of Public Law 104-106)

The E-Government Act of 2002 (Public Law 107-347)

Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), August 7, 1998

Information Quality Act of 2001 (Public Law 106-554)

Office of Management and Budget Circular A-130; Management of Federal Information Resources

Office of Management and Budget Circular A-11; Planning, Budgeting, Acquisition, and Management of Capital Assets

Homeland Security Presidential Directive-7: Critical Infrastructure Identification, Prioritization, and Protection

Privacy Act of 1974 (5 USC 552a)

Telecommunications Act of 1996 (PL 104-104)

This SITP serves as the linkage between the [Department of Commerce Strategic Plan](#) and the SITPs developed by the DOC operating units. It draws upon strategic guidance found in the Department's Strategic Plan and sets the direction for development of the operating units' individual SITPs.

In this document you will find our strategies for implementation of legislative mandates, the vision of the Department's Chief Information Officer (CIO) for implementation of the Department's overall strategic plan, linkages between the SITPs of the Department's operating units, and the framework of strategic requirements to be implemented through the Department's use and management of Information Technology. Specific guidance, which shapes our formation of this plan, is found in the Department's [Annual Performance Plan and Accountability Report](#) and our Information Technology [Capital Planning and Investment Control Process](#).

Our Strategic IT Plan is intended to serve several functions:

It identifies our IT vision and will serve as a measuring stick to determine our success in progressing toward that vision.

It defines the strategies we will follow to ensure that the Department acquires IT resources of the highest quality, manages those resources in the most effective manner possible, and makes efficient use of those resources in achieving our highest-level goals.

It gives form to an environment to which Commerce's diverse operating units should strive. Accomplishment of our Departmental IT goals requires a coordinated effort by all of our organizational components.

Please direct comments or questions to the Office of Information Technology Policy and Planning (OITPP) at (202)-482-0266.

IT Strategy in the Department of Commerce

OBJECTIVES OF THE OFFICE OF THE CHIEF INFORMATION OFFICER

The Commerce Department's Chief Information Officer (CIO) provides leadership and guidance for the Department's effective and secure use and management of its IT resources. The CIO places a high priority in the application of secure and innovative information technologies throughout the Department, and encourages the CIO of each of the DOC operating units to communicate the same priority throughout their organization. As the Department's IT leader, the CIO establishes the IT vision and strategy that will enable the Department and its operating units to successfully execute their core missions.

Efficient Acquisition and Management of IT Resources

It is the objective of the DOC CIO to further strengthen the Department's processes involved in the acquisition and management of IT resources, to maintain a robust IT Capital Planning and Investment Review process, and to ensure that the Capital Planning and Investment Control (CPIC) process is integrated with the Department's enterprise architecture. OCIO oversees an annual investment of approximately \$2.8 billion in IT hardware, software, and services. Our CPIC process, as envisioned in the Clinger-Cohen Act of 1996, OMB Circular A-130 (Management of Federal Information Resources), and other related guidance and regulations serves as the vehicle for the execution and management of this investment. DOC policies and implementation guidance developed by OCIO directly support OMB guidance and provide a structured process for the review and evaluation of proposed IT initiatives as well as the control of ongoing IT projects.

Innovative Use of Technology

The Office of the Chief Information Officer (OCIO) actively pursues and supports the increased use of leading-edge technology throughout the Department. From the annual strategic IT planning process through the development, implementation, and deployment of operational IT systems, OCIO encourages all of the DOC operating units to seek out secure and innovative approaches to achieving the Departmental mission more efficiently, and to deliver DOC products and services of the highest quality while maintaining low cost to the taxpayer.

Protection of Information Resources and our Critical Infrastructure

Also of high importance to the CIO are the Department's IT Security and Critical Infrastructure Protection activities. As more and more Departmental information is made available in electronic format, the potential for compromise of that information grows exponentially. To ensure the confidentiality, integrity, and availability of the Department's information resources, the Department has taken a holistic approach in securing its IT posture. Using a defense-in-depth strategy, the Department is implementing policies, procedures, and standards to utilize automated tools for strong authentication, network monitoring, security training and reporting. This increased vigilance will ensure continuity of the Department's missions and operations.

Attraction and Development of the Best Workforce

The Office of the Chief Information Officer is also committed to attracting and developing the best possible workforce to ensure the successful implementation of Departmental IT initiatives and policies as well as the seamless adoption of new and secure technologies throughout the Department. Recruiting and maintaining a well-trained, dynamic, and flexible workforce strengthens the OCIO's role in leading the Department and its operating units as they effectively integrate innovative IT solutions into their strategic decision-making processes and business operations. To that end, OCIO hiring and training strategies will focus on attracting, developing, and maintaining the right mix of competencies needed to meet the goals of the organization.

Dissemination of Timely, High-Quality Information

The DOC CIO continues to place a high priority on increasing the quality, timeliness, and amount of information available to our customers in electronic format. In order to maximize our potential as a transaction-oriented e-government entity, we focus our efforts on making all information of any potential use or interest to the public available on the Internet. Commerce disseminates a wide variety of economic, demographic, and scientific information, much of this information is released on prescribed public schedules or updated at stated intervals. We make every effort to share as much information as possible, while maintaining statutorily required confidentiality and protecting the privacy of individuals and businesses. Our priorities and schedules for scheduled information release are available on our [Web site](#) and our [Information Quality Guidelines](#) describe more fully our information dissemination standards.

Organization and Categorization of our Information Products

Commerce organizes its available information within two general categories:

Information Disseminated to the Public-at-Large

This category of information is published directly to the Internet, thus exposing it to freely available sophisticated search technologies. While the ease of indexing and searching the underlying data mitigates the need for formal data models, our Web standards and information quality guidelines provide a consistency to the quality and structure of these information products. The majority of information produced by Commerce fits this category and is not subjected to formal modeling or explicit cataloging.

Significant Information Products Exchanged Among Specific Identifiable Groups

The exchange or dissemination of this category of information is often not accommodated by freely available search functions. Because such search functions do not adequately organize and categorize these information products, formal data models are employed to ensure their effective dissemination. Because of the diverse nature of the information products produced by Commerce's various operating units, no single data model is appropriate for their dissemination. The formal data models employed by operating units such as the Patent and Trademark Office (USPTO), Bureau of the Census, National Institute of Standards and Technology (NIST), National Telecommunications and Information Administration (NTIA), etc., are determined by industry standards, widely accepted practices, and/or international treaty. Each of the Commerce operating units has published a Data Reference Model (DRM) that relates, at a high level of characterization, their unique information products to the federal DRM.

Commerce's Dissemination Review Process

Each of Commerce's operating units maintains dissemination review programs and posts the results of those reviews to their individual Web sites. Examples of these dissemination review programs can be found at these Web sites for [Census](#), [NIST](#), [NTIA](#), and the [USPTO](#).

At a Departmental level, Commerce collects operating unit-specific inputs and conducts a dissemination review in conjunction with its annual report to the Office of Management and Budget (OMB) on its accomplishments in implementing the E-Government Act.

Coordination with the Department's Freedom of Information (FOIA) Operations

In conjunction with our efforts to make all our information products widely available to the public, we take a proactive approach to meeting both the letter and spirit of the [Freedom of Information Act](#) (FOIA). We maintain a Departmental FOIA reading room within the Herbert C. Hoover Building in Washington DC as well as an [electronic reading room](#) on the Internet. Each of Commerce's operating units maintains its own conventional and electronic reading rooms as well.

As part of our annual e-government report, Commerce provides an updated description of our efforts to improve both access to and dissemination of our information products. In our [FOIA Implementation Plan](#), we describe our procedures for responding to FOIA requests and our Department-wide requirement for sending an acknowledgement letter to all requesters of FOIA information. Our [FOIA Improvement Plan](#) provides a detailed description of our plans for reduction of FOIA backlogs and our method of multi-track processing that provides the flexibility to address relatively simple requests more quickly than through a single-track process.

Our FOIA Implementation Plan further describes our methodology for responding to FOIA requests with a compelling need. The term "compelling need" is defined as: (1) in the case of a requester that is primarily engaged in disseminating information, an urgency to inform the public concerning actual or alleged federal government activity, or (2) an imminent threat to the life or physical safety of an individual. Where it is determined that a FOIA request meets the established criteria of a compelling need, the request is accorded priority handling and the requested records are provided as soon as practicable.

Commerce and Data.gov

Throughout its history, the Department of Commerce has published high-value data as part of its scientific, technological, and economic programs. As a result, Commerce has been able to establish best practices in distribution and publication processes that meet the ever-evolving needs of the public.

By September 1, 2009 – well in advance of when the "Open Government Directive" was issued – Commerce had published over 104,000 data sets and data tools on Data.gov and, by January 22, 2010, it had released over 60,000 additional data sets and tools. While the vast majority of the data sets involve Census geodata that will allow the public to map other bits of information, Commerce's 166,600 data sets also include 40 tools that should make other sets easier to use. The tools in Data.gov provide access to multiple datasets; in some cases these represent thousands of raw datasets from an organization.

To assist Commerce in adhering to the guidance provided in OMB Open Government Directive and to make existing and new data sets and tools more easily accessible by the public, the

Department has established an internal community of Data.gov points of contact (POCs) from each of its operating units. This communication network supports the enhanced exchange of information throughout the Department. As part of that effort, Commerce has encouraged data owners to develop timelines to publish new information and enhance previously published information. Commerce is also improving existing data user tools to allow greater access across all of its operating units and by other federal agencies and departments.

The responsibilities of the Data.gov POCs are built on OMB’s guidelines for increasing transparency, participation, and collaboration. Their job is to focus on several themes: expanding access, utilizing open platforms, disaggregating data, adopting rapid integration, emphasizing program responsibility, growing and improving through user feedback and embracing and driving best practices. Commerce is using the POCs to build integrated, replicable processes that allow interaction between data owners, technical staff, knowledge management staff, and the public.

The following table provides additional detail about a snapshot of the data the Department is making available on Data.gov, the operating units that have provided or have responsibility for them, and how often they were downloaded. In the table below, for the purposes of the Open Government Directive, “high-value” datasets must have appeared after December 12, 2009 and met other criteria; many of the datasets listed below were available before this date. A significant number of datasets were newly provided in the raw format that developers and other members of the public find most useful.

Commerce Data Sets Released to Data.gov					
as of 9/23/2010					
<i>Agency / Operating Unit</i>	<i>Raw Datasets (high-value)</i>	<i>Tools (high-value)</i>	<i>Geodata</i>	<i>Total</i>	<i>Number of Times Downloaded 9/16/10 – 9/23/10</i>
Department of Commerce (DOC)	72 (56)	108 (40)	166,494	166,674	1,538
Bureau of Economic Analysis (BEA)	0	2	0	2	11
Bureau of Industry and Security (BIS)	2	0	0	2	18
International Trade Administration (ITA)	0	2	0	2	13
National Institute of Standards and Technology (NIST)	0	3	0	3	10
National Oceanic and Atmospheric Administration (NOAA)	32 (22)	42 (38)	2,001	2,075	790

Commerce Data Sets Released to Data.gov					
as of 9/23/2010					
<i>Agency / Operating Unit</i>	<i>Raw Datasets (high-value)</i>	<i>Tools (high-value)</i>	<i>Geodata</i>	<i>Total</i>	<i>Number of Times Downloaded 9/16/10 – 9/23/10</i>
National Technical Information Service (NTIS)	1 (1)	0	0	1	13
National Telecommunication and Information Administration (NTIA)	1 (1)	0	0	1	5
US Census Bureau (CENSUS)	4	31	164,493	164,528	389
US Patent and Trademark Office (USPTO)	32 (32)	28 (2)	0	60	289

Commerce and the National Information Exchange Model (NIEM)

The Department of Commerce is exploring the use of the National Information Exchange Model (NIEM), a government-wide cross-domain information exchange process. Commerce plays a significant role in enforcing restrictions in foreign trade. As part of the overall control of trade, DOC receives an information exchange from the U.S. Treasury, Office of Foreign Assets Control. This feed is being converted into a NIEM-compliant format and DOC is considering developing the capability to receive and process that feed. Additionally, DOC will evaluate expanding NIEM compliance to other parts of the trade enforcement segment as part of the overall redesign of its systems. NIEM will be added to the DOC Technical Reference Model

A Commitment to Continual Improvement

Commerce is committed to a process of continual improvement in its IT management practices. In order to understand how well we are performing and how we might improve that performance, Commerce conducts regular benchmarks of its IT management practices, measuring itself against the practices of leading organizations, both private- and public-sector. OCIO staff stays abreast of IT management best practices through participation at industry conferences, memberships in professional organizations, and subscriptions to professional journals, magazines, and newspapers. To stay abreast of practice standards in governmental organizations, we review General Accountability Office reports of IT management processes.

Under the Federal CIO Council’s Best Practices Committee, Commerce has spearheaded a Community of Practice for Capital Planning and Investment Control. Commerce has also reached out across the Government to share our IT management practices through presentations at the Information Resources College of the National Defense University, National Academy of Public Administration, National Academies, and industry groups such as the Armed Forces Communications Association, Association for Federal Information Resource Management, Project Management Institute (PMI®), and National Defense Industrial Association (NDIA).

THE INFORMATION TECHNOLOGY PLANNING PROCESS

The Commerce IT planning process requires that each operating unit develop strategic and operational IT plans. The purpose of the strategic IT plan is to focus attention on each operating unit's high-level, strategic application of IT to Departmental missions. The operating units' strategic IT plans highlight budget-year initiatives and address key planning issues such as the support of operating unit and Departmental missions, the incorporation of business process reengineering, and investment selection criteria such as return on investment, compliance with architectural goals, comprehensive risk management planning, and IT security.

The objectives of the Department's IT planning process are:

To ensure decisions relating to IT investment and management are fully informed and that they are made with the best information available;

To leverage the power of IT to improve delivery of Commerce products and services;

To anticipate future trends in technology and to ensure that those trends are exploited in the fulfillment of Commerce's mission;

To ensure that key stakeholders are properly identified and intimately involved in the planning, acquisition, and management of Commerce's information assets;

To intelligently evaluate alternatives for fulfilling the Department's IT needs and to ensure that decisions made reflect an optimal approach to satisfying cost, schedule, and performance requirements;

To ensure that decisions made regarding IT acquisition and management properly incorporate full consideration of the requirements for the security of information assets and that principles of individual privacy are fully integrated into IT solutions;

To promote a fully integrated approach to program planning, IT security management, and the processes of investment evaluation, selection, and control; and

To ensure that the products and services delivered to our customers reflect full value for the resources expended.

The IT planning process is integral to the Department's IT capital planning and budget development processes, enhancing IT decision making at both the Departmental level and within the various operating units. OCIO staff coordinates IT planning processes with budget calls to the operating units in order to support IT plan development and the budget review process. IT projects must clearly demonstrate alignment with high-level Departmental goals to successfully complete the budget review process.

The operating units' Operational IT Plans (OITP) are based on OMB Circular A-11, Section 300 and delineate the detailed actions and resources necessary to achieve the goals established in the Strategic IT Plan. The focus of the OITP is on the operating units' planned IT activities for the coming fiscal year and the achievement of performance measures required by the Government Performance Results Act (GPRA). The OITP is one piece of a coordinated suite of documentation, providing a linkage with the budget process and ensuring that related issues, such as the enterprise architecture, federal e-government initiatives, IT security, and privacy issues are considered on an ongoing basis. The OITP provides operational guidance to the

operating units' IT managers, identifying specific schedules, acquisition plans, and performance measures.

THE COMMERCE ENTERPRISE ARCHITECTURE

Commerce has established an enterprise architecture (EA) that promotes the effective management and operation of our IT investments in support of the business goals of the Department. The EA provides a comprehensive, integrated picture of current capabilities and relationships (the current architecture), a blueprint for the future based on the Department's Strategic goals (the target architecture), and a strategy for managing a transition from the current to the target environment. The EA also describes the information needed to carry out the Department's business processes; identifies the system applications that create or manipulate data to meet business information needs; and documents the underlying technologies that enable the generation and flow of information.

The EA is an essential tool for planning and managing the Department's resources and making maximum use of our IT dollars. It ensures the alignment of IT with the Department's strategic goals so that business needs drive technology rather than the reverse; identifies redundancies, and thus potential cost savings; highlights opportunities for streamlining business processes and information flows; assists in optimizing the interdependencies and interrelationships among the programs and services of the Department's operating units; ensures a logical and integrated approach to adopting new technologies; promotes adherence to Department-wide standards, including those for information security; and pinpoints and resolves issues of data availability, access, and quality.

Commerce's EA serves as an essential tool for strategic decision-making. DOC's enterprise-wide architecture program and processes allow the Department to plan cost-effective IT capital investments that are directly linked to the Department's missions and strategic goals. Our EA efforts contribute to both Commerce and government-wide efforts to achieve efficiencies through sound use of information technology. Both the Office of Management and Budget and the General Accountability Office are committed to the effective use of enterprise architecture, are actively promoting its value, and providing oversight to ensure the establishment of dedicated enterprise architecture programs.

The Department has developed a cohesive set of architecture guidance documents, including standards, reference models, and best practices. These plain-English documents help ensure that each of the operating unit architecture programs produces useful results and is in full compliance with the Clinger-Cohen Act and the Office of Management and Budget Circular A-130, which require an architecture process for each federal agency. Commerce measures its status and progress against the OMB EA Assessment Framework. Commerce's status and progress are steadily improving.

Structure

The DOC EA has a broad scope. The DOC EA is a federated architecture. Each operating unit has the latitude to define its own architecture based on its mission needs, while the architecture segments that are enterprise-wide are managed globally. The Department-wide architecture addresses lines of business and services common to all operating units. It establishes basic goals and directions, characterizes common systems and services, and defines fundamental standards universal to all operating units. This approach provides the operating units flexibility in

executing their mission specific lines of business, while providing greater efficiency and reduced cost for the common lines of business.

Infrastructure Consolidation

Commerce has extended its enterprise architecture focus to our IT infrastructure and this approach has been validated by the OMB Cloud Computing initiative. This initiative has defined a strategy to optimize the federal IT infrastructure, and DOC's consolidated infrastructure approach is in alignment with that strategy. Through use of appropriate aggregation, efficient intra-agency service standards, and best practices appropriate to bureau mission requirements, the Department expects to improve the efficiency of its IT infrastructure. Our focus will be on data centers, data networks, and desktop management.

The consolidation of our IT infrastructure has been undertaken with three objectives:

- To operate and maintain an evolving infrastructure that supports mission objectives,
- To improve services provided so that our customers have timely, reliable, and cost-effective access to Commerce information technology when and where they need it,
- To streamline and unify our IT infrastructure investments wherever possible.

This consolidated infrastructure methodology reflects our EA approach and establishes a Departmental program for the management of IT infrastructure, formed on a principle-based IT Infrastructure Management Framework. Our vision of the Commerce IT infrastructure capability is that it is mission driven and integrated with EA governance structures and processes.

Demonstrated Benefits

Development of a solid Program is a forward-looking, strategic planning effort that requires initiative and sustained work over a long period. As with any strategic planning function, benefits are generally realized in the long term. The proof of concept for the EA is in the selection and rational migration toward well-constructed target architectures. To this end, Commerce's continued developmental efforts are beginning to pay off in concrete ways, including the successful implementation of HCHBNet.

HCHBNet

HCHBNet is an overall building-wide network infrastructure in the Herbert C. Hoover Building (DOC Headquarters). Using an architectural approach to analyze the existing 14 separate networks, Commerce combined them into one, and then leveraged this infrastructure to combine over a hundred smaller phone systems into one Voice Over IP (VoIP) phone system with emergency broadcast capability.

HCHB Server Consolidation

In conjunction with the renovation of the HCHB building, DOC is consolidating all of the servers located in the building into a single computer room. This will reduce overall cost for air conditioning and power, reduce the overall staffing required to manage the servers, and provide opportunities to share resources that was not possible before.

THE CAPITAL PLANNING AND INVESTMENT CONTROL PROCESS

The success of Commerce's IT investments directly influences the ability of the Department and its operating units to execute business plans and fulfill missions. Recognizing both the importance of IT investments to the organization and the organization's role in supporting the success of these investments, OCIO has established a CPIC process. This guidance directs that investment control processes must include three essential phases: Select, Control, and Evaluate. Each phase is conducted as part of a continual interdependent management effort aimed at moving from a fixation on project-by-project focus to a wider, portfolio perspective of investment trends, directions, and outcomes.

Commerce's CPIC process links all IT investments to the strategic goals of the Department. The business case for each IT investment must identify its linkage to the Department's and operating unit's mission, goals and objectives, and address how it will enable and facilitate the achievement of the strategic goals and objectives. A more complete description of the Department's CPIC process is available on our [Capital Planning and Investment Control Website](#).

The Commerce Information Technology Investment Review Board (CITRB)

Central to the management of the CPIC process is the guidance provided by the Department of Commerce Investment Review Board (CITRB), which serves as the senior oversight board in the investment review process and provides decision-making recommendations to the Secretary. The CITRB is co-chaired by the DOC Chief Information Officer (CIO) and Chief Financial Officer/Assistant Secretary for Administration (CFO/ASA), and helps ensure that proposed investments contribute to the Secretary's strategic vision and mission requirements, employ sound IT investment and management methodologies, comply with Departmental system architectures, employ sound risk management processes and IT security measures, and provide the highest return on the investment. The CITRB membership performs a review of key program elements to assess health, and provides oversight of the application of IT policies and mandates in addition to the assessment of measurable data tied to total life-cycle investment planning, budgeting, and execution. The CITRB also serves as a feedback mechanism to recognize strengths, address weaknesses, and offer constructive assistance.

Major investments with program/project life-cycle values exceeding \$75 million, new procurement actions exceeding \$25 million or otherwise designated by the Deputy Secretary as being either high risk or critical to the DOC's mission are subject to CITRB review. CITRB reviews address new projects, projects that are in progress, at key milestones, or demonstrate a need for management intervention. During the Department's annual budget formulation process, proposals for new IT initiatives, (including major increases, and major changes) along with supporting documentation, are presented to the OCIO and CITRB for review assessment and prioritization. Project sponsors brief the CITRB on the merits of their projects, justification for increases and the CITRB then rates and ranks the proposed initiatives according to documented evaluation criteria. Projects that receive the highest ratings are forwarded as approved by the CIO for the budget formulation process. The CIO provides finalized project ratings and recommendations to the Office of Budget and Departmental executives for determining final budget approval.

The CITRB review process includes an initial “technical review” performed by Departmental personnel with expertise in risk management, CPIC process, cost-benefit analysis, project management practices, enterprise architecture, e-government strategy, privacy, IT Security, Acquisition planning, budgeting, or other technical competency areas specific to the project in question. The results of these expert “technical reviews” provide the CITRB with insight concerning how well Commerce’s ongoing systems are meeting cost, schedule, and performance goals, and assist the Board in directing corrective actions as necessary. Additionally project managers of major investment initiatives with high visibility, or significant risk factors, submit monthly Earned Value Management reports that provide the DOC OCIO with an executive-level view of the cost and schedule performance of the Department’s IT investment portfolio.

Not all IT investments are subject to formal DOC CITRB reviews nor are all required to provide quarterly earned value reporting. However, as part of the monthly OMB IT Dashboard review process, OCIO staff review key performance items of all IT systems/investments within the CPIC Exhibit 300 database.

As an IT initiative is completed or reaches the operational life-cycle phase, a post-implementation review is conducted to explore lessons learned, verify how well it met the initial investment criteria, and to provide suggestions for better managing future projects. Managers of implemented projects are also required to submit an annual operational analysis that examines the initiative’s performance in terms of customer results, business results, cost and schedule performance, and innovation. Operational performance of implemented projects is compared to projections, thus providing valuable information relative to the project’s impact on operating unit and Departmental mission performance, and identifying any investment initiative modifications that may be needed. These operational analyses and review techniques allow the Departmental CIO to revise the investment management process based on lessons learned.

IT Portfolio Management and the Analysis of IT Investments

Commerce’s IT portfolio management process is the foundation of the CPIC process and the enterprise architecture. Over the last few years we have significantly increased our ability to ensure that proposed and current IT investments align with the Department’s strategic vision and actively contribute to our performance against Departmental goals. Working with the operating unit CIOs, the DOC OCIO has insisted that operating unit-level portfolio management processes (which are often administered through formal investment boards modeled after the CITRB process) link the strategic and operational goals to specific program initiatives and that strategic IT plans articulate how the CIOs’ organization, mission, vision, and strategic approach will equip the operating unit with the tools needed to achieve their strategic and organizational goals.

Specific accomplishments that demonstrate enhanced capabilities in analysis of IT investments and IT assets within the various DOC operating units are discussed in Appendix A.

IT Dashboard

In 2009 the White House established the federal IT Dashboard, a Web site enabling federal agencies, industry, the general public, and other stakeholders to view details of federal information technology investments. In accordance with OMB memorandum M-10-06, “Open Government Directive,” and in keeping with the administration’s goal of transparency and openness in government, Commerce has developed and documented detailed procedures for posting information about all IT investments to the federal IT Dashboard. Since then the

Department has successfully uploaded its most recent cost and schedule information to the IT Dashboard on a monthly basis. In addition, and as part of the monthly reporting process, Commerce has implemented a CIO Rating Assessment system that provides feedback to the operating units' CIOs by giving each IT investment a rating of red, yellow, or green based on the documentation provided every month. The Department's goal is to review all investments with a red or yellow CIO risk rating each month and to review one-third of all green-rated investments during that same period.

IT Governance

Commerce's IT governance process focuses on the consistent selection, evaluation, and control of our IT investments in a manner that is efficient, effective and transparent to the public. This process is designed to be fully compliant with all federal laws and regulations, and is intended to fully integrate the Capital Planning and Investment Control process, our e-government efforts, Commerce's Program Management Office, and the Departmental enterprise architecture. The Department's Chief Information Officers' Council (CIO Council) is the linchpin for the governance process.

Also key to our IT governance process is a proper recognition of the human talent brought to bear in the management of our IT investments. The Commerce Honors Award Program provides this recognition and is considered a component of our governance process.

In addition to the management guidance brought to the governance by the Commerce CIO Council, an in-depth technical expertise in a number of disciplines is necessary to properly advise the Council's decisions relating to the management of our IT investments. This expertise is provided through a number of advisory groups assembled from throughout the Department.

COMMERCE CHIEF INFORMATION OFFICERS' COUNCIL

The Departmental CIO views the CIO Council, composed of operating unit CIOs, as a management team working together to achieve common objectives. Through the CIO Council, operating units have a venue in which to share experiences, ideas, best practices, and innovative approaches related to information resources management.

The CIO Council's vision is to serve as a resource to help the Department's operating units perform more efficiently at lower cost by promoting the efficient and effective use of Departmental information resources. The CIO Council supports business process reengineering, continuous process improvement, and measurable increases in performance in the work related to the achievement of Departmental missions, goals, and objectives.

The CIO Council provides an opportunity for all DOC operating unit CIOs to confer in the following areas:

Implementation of an effective process for managing IT resources and providing regular briefings to the DOC CIO on IT program activities;

Implementation of a process for the selection, control, and evaluation of IT investments;

Annual self-assessment of the maturity of the operating units' CPIC process; and

Keeping abreast of DOC guidelines for developing and maintaining operating unit planning and investment review processes.

The Department's CIO Council meets at least monthly to share information, promote Departmental IT goals, and keep abreast of public and private sector leading IT management practices.

DEPARTMENT OF COMMERCE HONOR AWARDS PROGRAM

Within the Department of Commerce, we're dedicated to maintaining a corporate culture of excellence and a commitment to exceptional performance in our everyday work. As a result, we have set ourselves the challenge of delivering only the highest quality services. Our belief is that one of the best ways of achieving excellence is to acknowledge the exceptional performance of individuals and organizations throughout the Department. In support of this commitment, DOC's Honor Awards Program was created to recognize those who set the highest standards of performance, thereby raising the bar for us all.

The Honor Awards, in the form of Gold and Silver Medals, constitute the highest and second highest levels of recognition granted for distinguished and exceptional performance within the Department of Commerce. Although no monetary reward is associated with this recognition, it is clear that Commerce employees regard these awards as the ultimate recognition for their contributions. A Bronze Medal is the highest honorary award granted by an operating unit, a Secretarial Officer or equivalent, and is defined as superior performance characterized by outstanding or significant contributions, which have increased the efficiency and effectiveness of the operating unit. To warrant a Bronze Medal, a contribution must focus on qualitative and quantitative performance measures reflected in the Department's Strategic Plan.

Over the past several years, honor awards in all categories - Gold, Silver, and Bronze - have been granted to individuals and groups throughout the Department who have made significant contributions to the innovative planning and management of Commerce's IT resources.

We feel that these honors recognize the collaborative commitment to excellence exhibited by the IT professionals from throughout the Department, and serve as firm evidence of the high quality with which DOC IT initiatives are managed. Without the contributions of these cross-Departmental groups and a sincere dedication to quality at the individual level, many of our leading-edge initiatives would never have come to fruition.

DEPARTMENT OF COMMERCE ADVISORY GROUPS

Central to the governance process are the processes of strategic planning, prioritization, decision-making, and performance measurement relative to all our major IT investment, whether developmental or steady-state. The CIO Council is advised on these processes through the expertise of several advisory groups within the Department. These groups and a discussion of their activities are discussed in Appendix B – Department of Commerce Advisory Groups.

OCIO Goals, Strategies, and Performance Measures

Goal 1 *To continue to improve our support to the Department's customers and business partners by maximizing our use of the Internet and aligning our online business functions with federal e-government and Line of Business initiatives.*

Through the Department's CIO Council and its advisory groups, Commerce's operating units have worked together to identify common technical solutions for the implementation of Internet-based services. Each of the operating units and Departmental offices has made great strides in achieving internal interoperability and providing new and more efficient services to our customers and stakeholders. Our approach to date has been to create innovative solutions, rather than simply automate existing processes. We have transformed the Department of Commerce into a truly electronic government entity, demonstrating significant performance gains, and providing leadership at the national level. It is our intent to continue this transformation by delivering even more of our public-facing services through the Internet and to improve efficiencies government-wide by consolidating and integrating our online services with established federal e-government and Line of Business initiatives.

The strategic initiatives outlined below were developed to support an electronic government. They are based on an assessment of our agency's baseline situation and its challenges and risks, the performance metrics we are using to measure success, and the investments in people, processes, and technological infrastructure required to achieve our goal of an expanded electronic government capability.

Strategy 1.1: Require, through the IT planning process and the CPIC process, that the Department's information collection and dissemination activities make maximum use of the Internet, using innovative technologies to provide our customers with easier and more efficient access to our e-government capabilities.

Initiative: The CITRB process for approval of new IT initiatives requires the establishment of a measurable e-government goal and the submission of a business case that demonstrates the innovative use of the Internet to reduce the reporting burden placed on our customers.

Each operating unit has addressed, in their Strategic IT Plan, a methodology for furthering the Department's e-government goals and implementing Internet-based e-government initiatives. The implementation of these methodologies is a criterion against which the operating units are assessed in the CITRB review process.

Strategy 1.2: In order to further maximize the efficiencies of our e-government offerings, Commerce has eliminated redundancies between our offerings and other, federal-wide e-government and Line of Business initiatives. Additionally, we have aligned all of our e-government initiatives with federal-wide e-government and Line of Business initiatives, and we will conduct annual reviews to ensure that this alignment continues.

Performance Measures:

- 1.1 DOC's progress in embracing the Internet as a customer-service vehicle is exemplified by the implementation of our [e-Gov Highlights](#) Web site, through which the public is able to buy products, obtain information, and apply for fishing permits, export licenses, and patents and trademarks.

Commerce has demonstrated effective use of the Internet by converting 80 percent of our transactions with the public to an electronic format and making most of these transactions achievable through the use of electronically fillable forms. This has helped us to achieve our aggressive e-government goals and significantly reduce the amount of paperwork required, both in our dealings with the public and in internal Departmental operations. Future goals include incorporating these electronically fillable forms into end-to-end electronic processes that will remove one more layer of manual intervention from our business processes.

In addition to eliminating the need for paper-based transactions, DOC has made significant achievements in the area of Web-based public informational services. Our progress in offering our services and products online is demonstrated by the amount of traffic experienced by the Department's Internet Web sites. In July 2009, Commerce was ranked by comScore as the most visited of all U.S. Government Web sites. NOAA's National Weather Service Web site is particularly popular during the June to October hurricane season.

Commerce's policy regarding its Web sites is structured to ensure that all of our Web sites are in compliance with appropriate legislation and regulations. Departmental policy requires that operating unit CIOs certify to the Departmental CIO that all Web sites maintained by their organization comply with the Department's Web policies. These policies address issues including content management, Web site traceability and accountability, Web site accessibility, visitor privacy, appropriate use, annual Web site certification, and inclusion of privacy policies in Platform for Privacy Preferences format. While compliance with those policies requiring significant infrastructure investment lag behind the more easily achieved policy requirements, Commerce's compliance rates range from 92% to 98%.

- 1.2 A measure of success of the e-government International Trade Process Streamlining (ITPS) initiative is that OMB has elevated the program to "fully-implemented" status. Commerce continues to serve as the managing partner for ITPS, a seamless environment within which small and medium-sized enterprises (SMEs) can research markets, gather trade leads, and conduct a majority of their export transactions online. Through ITPS, U.S. businesses are able to achieve real cost savings by reducing the amount of time they spend gathering information, completing forms, and interacting with disparate government agencies. ITPS has consolidated and integrated the export process online under Export.gov, which includes foreign partner matching/verification, export financing and insurance, and consolidated market research. The interagency aspect of ITPS has been further expanded to include the NAFTA Certificate of

Origin form, the integration of content from the United States Department of Agriculture's Foreign Agriculture Services into Export.gov, and an online credit application. Companies interested in evaluating U.S. trade relationships with foreign markets can retrieve the latest annual trade data, visualize, analyze, print, and download customized output using Export.gov's interactive tool, [TradeStats Express](#).

Commerce is also a participant in 31 other e-government and Lines of Business initiatives. The Department's CIO has taken an aggressive stance and is committed to eliminating any duplication with any government-wide e-government initiative. Commerce's strategy toward participation in federal e-government initiatives dictates that we will provide back-end processing only for the various e-government portals and storefronts.

The Department also participates in numerous crosscutting programs involving multiple bureaus; other federal, state and local agencies; foreign governments; and private enterprise. The Departmental CIO has stressed to the operating unit CIOs the importance of seeking opportunities for further participation in interagency e-government initiatives. Specific areas where Commerce sees possible opportunities to establish further e-government involvement include:

Commerce leads and the Secretary chairs the federal government's Trade Promotion Coordinating Committee (TPCC), which consists of at least 20 agencies, and seeks to establish a government-wide strategy for export promotion activities;

EDA builds partnerships with federal, state, and local entities including: the Federal Emergency Management Agency (FEMA), the Environmental Protection Agency (EPA), the Department of Energy (DOE), the Department of Labor (DOL), the Department of Agriculture (USDA), the Department of Transportation (DOT), the Department of Housing and Urban Development (HUD), the Appalachian Regional Commission (ARC), and the Denali Commission;

BEA relies on the Census Bureau, Bureau of Labor Statistics (BLS), and the Internal Revenue Service (IRS) as data sources. Census provides BLS with monthly unemployment data. BEA also works closely with other agencies producing statistics including the U.S. Departments of Agriculture, Defense, Education, Energy, Health and Human Services, Transportation, and Treasury;

Census works with state governments to make data available locally to the public through a variety of channels. Census also works with foreign governments through the International Programs Center to assist in the use of statistics.

Commerce feels that, as a provider of information to a user community of citizens, it is important to periodically evaluate whether the service is meeting the needs of its users. Often times, direct communication can provide useful feedback for changes as well as new ideas for future products.

One example of our performance measurement via direct customer feedback is the annual NOAA Data and Information Users' Workshop hosted by NOAA's National Environmental Satellite, Data, and Information Service. The workshop provides a forum for scientists, researchers, managers, and technicians from NOAA to meet with the data user community. Users from academia, the private sector, the research community, and the government provide

independent input that assists NOAA in planning for the future of data and data delivery. The goals of the workshop are to:

- Assess users’ needs and societal benefits;
- Review and update users’ needs for new products, data archiving, and access to stored data and plans;
- Improve communication and rapport with users;
- Solicit users’ opinions on current data and information products and services; and
- Inform users of future capabilities, plans, and data sets.

User recommendations have most frequently touched on ensuring that user communities have input into decisions affecting them, integrating multiple data sets into a seamless environmental database, and maintaining human customer interface. NOAA considers this workshop and the recommendations provided by the user community to be crucial to maintaining a continuing dialogue with its constituents, and evaluates and follows through on each recommendation.

The International Trade Administration (ITA) also relies on direct customer feedback for performance feedback. ITA collects Export.gov “Ease of Use” performance scores and enters them into an ITA-wide performance measure tracking system.

Export.gov’s customer satisfaction and site usability ratings are collected using an online user feedback form, accessed from the Export.gov home page. The feedback form includes a number of open-ended questions which allow the user to specify the type of information they were seeking, describe the usefulness of the site’s search capabilities, and provide suggestions for improvement.

A number of ongoing performance measures for Export.gov were recently developed. These measures, along with FY 2010 performance targets are provided in the table below:

Metric	FY 2009 Performance	FY 2010 Target
Percentage of the 11 agencies on the Trade Promotion Coordinating Committees providing export content to Export.gov	100%	100%
Number of new company registrations on Export.gov	5,000	10,000
Number of visitors to Export.gov per year	2.5 million	1.6 million
Number of trade opportunities accessed via export.gov	74,000	90,000
Percentage of customers assessing the usability of Export.gov as “good” or higher.	73%	75%

Goal 2 *To further improve the Department's Capital Planning and Investment Control process, ensuring that the portfolio of investments in IT resources is supportive of Commerce's strategic goals.*

Strategy 2.1 Institutionalize a process of continual improvement in the IT Capital Planning and Investment Review process and ensure that Commerce's Departmental vision for IT management is fulfilled and enhanced at the operating unit level.

Initiative: Increase the CITRB's CPIC oversight capabilities by:

Continuing pre-reviews in project management planning, enterprise architecture, and IT security.

Maintaining a cyclical review process through which all IT projects/systems are reviewed and the Department's IT portfolio is systematically analyzed and adjusted.

Ensuring that all IT projects/systems contribute to the Department's top-level performance measures and expanding the Department-level compliance review process relative to policies and architecture.

Performance Measures:

- 2.1 Commerce's Departmental CIO relies on a CPIC Maturity Model to assist our operating units in focusing on key elements of the CPIC process and developing a well managed IT operation. We have recently crafted a new CPIC Maturity Model based on the General Accounting Office's (GAO) publication "Information Technology Investment Management – A Framework for Assessing and Improving Process Maturity." This new Maturity Model should bring more objectivity to the self-assessment process and encourage a greater degree of documentation of the activities critical to the CPIC process. The model was successfully piloted in March 2009 and officially deployed in FY 2010.

Strategy 2.2: Further improve the IT project management capabilities within all operating units.

Initiative: Maintain the high caliber of DOC project management capabilities by continuing to collaborate with the Office of Human Resources Management (OHRM) on a curriculum of project management training, and completing certification training for those project managers who need it. Ensure that DOC project managers place greater emphasis on efficient project management techniques, including Earned Value Analysis, Earned Value Management Systems, and project risk analysis.

Participate as a voting member of the FAC-PPM Functional Advisory Board to develop and provide to the Office of Federal Procurement Policy (OFPP) recommendations for improvement to the underlying requirements of the FAC-PPM program. Performance Measures:

- 2.2 Commerce maintains a set of project manager qualification guidelines that specify experience and training requirements for DOC project managers assigned to major IT investments. The Departmental OCIO has reviewed the resumes of the project managers of all major IT project investments within the Department and has validated that every DOC project manager assigned to a major IT investment meets both DOC and OMB certification and/or experience requirements.

Commerce has implemented a certification program that is now fully functional at the Senior/Expert level and that meets the needs of the Federal Acquisition Certification for Program and Project Managers (FAC-P/PM) published by OMB in April 2007. We are currently investigating the need for certifications at the Entry and Mid/Journeyman levels.

Commerce has instituted a program of continuous improvement of the project management talent within the Department by providing formal training and professional certification of our project managers. The number of project managers who have achieved Project Management Professional (PMP®) certification from the Project Management Institute continues to increase and OCIO continues to collaborate with the Department's Office of Human Resources to refine the curricular requirements for an on-going project management training program offering a Master's Certificate in Project Management through the George Washington University (GWU).

Commerce has instituted a requirement that managers of all major IT investments – both development projects and steady-state initiatives – provide OCIO with regular, ongoing performance reports. Performance reports for development projects are in the form of monthly Earned Value Management (EVM) variance reports and cost and schedule performance indices, along with estimates to complete and estimates at completion. Since the inception of this reporting requirement, Commerce's portfolio of IT investments has demonstrated improved performance and is now well within OMB's suggested tolerance of +/- 10% for both cost and schedule baselines.

Goal 3 To ensure that Commerce's IT systems and information resources are safeguarded through a risk management-based process that properly weighs operational and IT security requirements in providing for confidentiality, integrity, and availability. Commerce continues to maintain a robust IT Security Program harnessing the benefits of centralization in providing Department-wide strategic direction and oversight, while also using a decentralized model with our operating units to enable them to be innovative in meeting mission unique requirements.

- Strategy 3.1 The Department of Commerce (DOC) will maintain a robust IT Security Program in accordance with the Federal Information Security Management Act (FISMA), the Office of Management and Budget's Circular A-130, and other governing regulations and provide Department-wide continuous monitoring compliance. DOC will strengthen the program to not only provide oversight to ensure all operating units are complying with regulatory requirements, but also to build a robust cyber defensive posture that mitigates risks to its IT infrastructure.
- Strategy 3.2 The Department will further automate the Commerce's Security Authorization process to ensure IT security requirements are assessed and addressed throughout a system's lifecycle. DOC will ensure that the work required to perform the Security Authorization process culminates in the clear and unambiguous identification of residual risk that can be readily communicated to Commerce's senior executives.

- Strategy 3.3 The Department maintains a structured Homeland Security Presidential Directive 7 (HSPD-7) Critical Infrastructure Protection (CIP) program to ensure the continued viability of IT systems that support national essential functions. DOC demonstrates the effectiveness of CIP program through regular testing of reconstitution and response plans, and regular conduct of vulnerability assessments and tracking of corrective actions through the FISMA Plan of Action and Milestones (POA&M) process.
- Strategy 3.4 In an effort to strengthen its IT security workforce along with its general security awareness training and annual refresher training programs, the Department has created the Cyber Security Development Program (CSDP) to support the future development of a highly skilled and knowledgeable cyber security workforce.
- Strategy 3.5 The Department will fully implement the OMB memorandum 08-05 Trusted Internet Connection (TIC) requirements by consolidating Internet connections to authorized service providers.

Performance Measures:

The Department will continue to meet the FISMA performance measures and Department-wide continuous monitoring compliance reporting requirements by submitting the required OMB POA&M reports monthly. DOC will conduct annual assessment reviews on at least four (4) operating units quarterly with at least one (1) IT security program covering each of the DOC operating units annually.

The Department will conduct Security Authorization reviews for at least four (4) operating units quarterly on at least one (1) IT security program covering each of the DOC operating units annually. DOC will demonstrate that it has identified the FISMA inventory of its IT systems that has been properly categorized for support of national essential functions by providing the DOC CIO Council with a monthly report.

The Department will conduct required examinations of its CIP assets through its annual Business Continuity Plan (BCP) operational exercise. DOC will provide quarterly reports to the National Communications System (NCS) on minimum communications capabilities for its CIP assets.

Along with annual Security Awareness Training to all its personnel, the Department will conduct annual CSDP certification classes to provide role-base training for personnel with significant IT security responsibility.

With the exception of NOAA, which plans to become a Trusted Internet Connection (TIC) Access Provider, the Department will complete its GSA's Network migration by September 2012. DOC will provide yearly reports to the Department of Homeland Security (DHS) on its TIC initiative implementation.

Goal 4 *To leverage the Department's enterprise architecture in a continual process of improving our business processes, aligning resources with Commerce's top-level strategic goals, and identifying and supporting key IT management decisions.*

Strategy 4.1 Ensure that Commerce IT management maintains a focus on improvement of mission performance and that identifying opportunities to take advantage of leading edge technology is part of that focus.

Strategy 4.2 Inculcate in the CITRB a focus on the use of new technology and ensure that management of the continuing introduction of new technology is a part of the CITRB review of new IT Initiatives.

Strategy 4.3 Encourage the reengineering of business processes so that the Department's day-to-day operations will be able to exploit the latest developments in IT to improve mission performance.

Strategy 4.4 Reduce redundancy in the Department's portfolio of IT resources. Combine capabilities, utilize already-existing resources, and ensure that available IT resources are documented and visible for all potential users.

Initiative: Commerce is analyzing shared services and multi-tenancy strategies and evaluating the consolidation and decommission of its data centers. Our objectives are to increase server virtualization and IT equipment utilization, make use of cloud computing, acquire green products and services, and promote green IT as part of our consolidation activities. Commerce currently operates 41 data centers across the country. The Commerce Federal Data Center Consolidation Initiative (FDCCI) plan is to close or consolidate at least 20 data centers within three years and up to 26 data centers within five years.

Strategy 4.5 Utilize the DOC enterprise architecture and operating unit-specific architectures to identify and support key IT management decisions.

Initiative: Commerce uses the full suite of Federal Enterprise Architecture (FEA) models to describe the business operations of the entire Department and to identify areas for collaboration both throughout the Department and across other federal agencies. Currency and relevancy of our architecture models can only be maintained if our IT planning process fully examines and aligns with those models.

Performance Measures:

Commerce measures progress in the use of its enterprise architecture by performing an assessment against the OMB EA Assessment Framework. The OMB EA Assessment Framework allows for self-assessment in three capability areas:

Completion of an agency EA,

Use of the agency's EA, and

Results achieved through the use of an EA.

- 4.1 At BEA, the legacy ASTAR system was shutdown for any new filings, and all international survey reporters are re-directed to the replacement system, eFile. The new system was developed and supported in-house, and offers a simpler, more streamlined system to end users and lower maintenance costs for OCIO.
- 4.2 The NOAA Comprehensive Large Array-data Stewardship System (CLASS) is a Web-based data storage and distribution system for high volumes (petabytes) of archived environmental data derived from the following satellites and observing systems: GOES (and GOES-R in 2015), POES DMSP, MetOp, EOS/MODIS, NPP, JPSS, NEXRAD, USCRN, COOP/NERON, oceanographic sensors and buoys, and solar environmental data.
- 4.3 NOAA has combined the dual processing environments of the Central Environmental Satellite Computer System (CEMCSC) and the Satellite Environmental Processing System (SATEPS) and now operates one Environmental Satellite Processing Center (ESPC). This combination of capabilities has improved NOAA's centralized IT planning, architecture, security, and continuity of operations capabilities. Tangible benefits of this consolidation have been a reduction in the numbers of computer operators and system administrators, and the elimination of the need for a second mainframe computer.
- 4.4 Commerce has reduced redundancy, combined capabilities, and is better utilizing existing resources through the use of our Consolidated Infrastructure Program. This program has four objectives: 1) to operate and maintain an evolving infrastructure that supports mission objectives, 2) to improve services provided so that our customers have timely, reliable, secure, innovative, and cost-effective access to Commerce information technology where and when they need it, 3) to enable all Commerce employees to fulfill their responsibilities efficiently and effectively, and 4) to streamline and unify our IT infrastructure investments wherever possible.
- 4.5 The Census Bureau extended directory services to provide a centralized identity management system capable of supporting future Homeland Presidential Security Directive 12 (HSPD-12) logical authentication requirements. The LAN directory and Identity Management (IDM) services support a variety of Web applications and other network services for authentication through the standard Lightweight Directory Access Protocol (LDAP) and synchronization of user login credentials for a unified (common) user identity and password. Additional systems are continually integrated for authentication, including the enterprise Oracle identity database. As part of this activity, a new centralized Web user password self-service system has been implemented.

Operating Systems and Oracle database applications, network infrastructure systems, and several administrative management applications are integrated with the Enterprise IDM system. Integration with Linux servers, additional Oracle database servers, and more Web applications will be ongoing.

Major IT Initiatives in the Department of Commerce

Commerce's capital planning and investment control process and enterprise architecture program require that any major IT investment demonstrate clear alignment with one or more of our Departmental strategic goals and that redundancy in IT investments be eliminated wherever possible. This disciplined approach to IT investments has allowed Commerce to fully align IT investment with our strategic objectives, eliminate redundant administrative systems, and develop Department-wide approaches to managing IT requirements. Major IT initiatives underway in Commerce include the following Departmental crosscutting initiatives, major modernization efforts, and operating unit-specific initiatives. All of these initiatives support the President's Management Agenda e-government goal. Table 1, below, provides a graphical depiction of the applicability of each of these initiatives to one or more of the Department's strategic goals, and each of the initiatives is discussed in detail in Appendix C – Major IT Initiatives in the Department of Commerce.

TABLE 1 – APPLICABILITY OF INITIATIVES TO DEPARTMENTAL STRATEGIC GOALS

<p>IT Initiative</p>	<p>Goal 1: <i>Provide the information and tools to maximize U.S. competitiveness and enable economic growth for American industries, workers, and consumers.</i></p>	<p>Goal 2: <i>Foster science and technological leadership by protecting intellectual property, enhancing technical standards, and advancing measurement science.</i></p>	<p>Goal 3: <i>Observe, protect, and manage the Earth’s resources to promote environment stewardship.</i></p>	<p>Management Integration Goal: <i>Achieve organizational and management excellence.</i></p>
<p>Departmental Cross-cutting Initiatives</p>				
<p>Homeland Security Presidential Directive 12</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>
<p>IPv6 Implementation</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>
<p>Trusted Internet Connection (TIC)</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>
<p>Commerce Business System</p>	<p>X</p>			<p>X</p>
<p>Commerce Business Environment</p>	<p>X</p>			<p>X</p>
<p>Office of Human Resources Management (OHRM) IT Systems</p>				<p>X</p>
<p>Herbert C. Hoover Building Infrastructure Network (HCHBNet)</p>				<p>X</p>
<p>Major Modernization Efforts Highlighted</p>				
<p>Census MAF/TIGER</p>	<p>X</p>			
<p>Patent Systems Modernization</p>		<p>X</p>		

IT Initiative	Goal 1: <i>Provide the information and tools to maximize U.S. competitiveness and enable economic growth for American industries, workers, and consumers.</i>	Goal 2: <i>Foster science and technological leadership by protecting intellectual property, enhancing technical standards, and advancing measurement science.</i>	Goal 3: <i>Observe, protect, and manage the Earth's resources to promote environment stewardship.</i>	Management Integration Goal: <i>Achieve organizational and management excellence.</i>
Other Operating Unit Specific Initiatives				
Data Access and Dissemination System (DADS)	X			
NOAA All-Hazards Emergency Messages on NOAA Weather Radio (NWR)			X	
NOAA Advanced Weather Interactive Processing System (AWIPS)			X	
Next Generation Radar Product Improvement (NEXRAD PI)			X	
National Weather Service Telecommunications Gateway Replacement (NWSTG)			X	
Joint Polar Satellite System (JPSS) [formerly NPOESS]			X	
NOAA Comprehensive Large Array Data Stewardship System (CLASS)			X	
Grants Online			X	X
NIST Time Scale and Time Dissemination		X		

IT Initiative	Goal 1: <i>Provide the information and tools to maximize U.S. competitiveness and enable economic growth for American industries, workers, and consumers.</i>	Goal 2: <i>Foster science and technological leadership by protecting intellectual property, enhancing technical standards, and advancing measurement science.</i>	Goal 3: <i>Observe, protect, and manage the Earth's resources to promote environment stewardship.</i>	Management Integration Goal: <i>Achieve organizational and management excellence.</i>
ITA International Trade Process Streamlining (ITPS)	X			
USPTO Data.gov Web Site	X	X		
NTIA Spectrum Management		X		
BEA Economic Accounts	X			
BIS Export Control Automated Support System (ECASS)	X			

Management Attention

The key areas of management attention at the Department of Commerce are the Patent Systems Modernization, Export Control Automated Support System Redesign and Modernization (ECASS 2000+), the Departmental IT Security Program.

MANAGEMENT CONCERNS

ECASS Replacement

BIS promotes U.S. national and economic security and foreign policy interests by managing and enforcing the Department's security-related trade and competitiveness programs. BIS' core export administration and export enforcement business processes have been directly supported by a legacy computer system, ECASS, since it was originally deployed in 1984.

The ECASS program is being modernized to incorporate newer technology and to provide a more robust operational capability. Modernization of the ECASS Program consists of the major ECASS (2000+) Redesign project.

The number one priority of the program is retaining the current IT capability to support the BIS mission. The ECASS (2000+) Redesign project is replacing the fragile ECASS Legacy system supporting 450 BIS staff and 41,500 exporters with a maintainable, reliable, current technology system. ECASS Redesign addresses the need to mitigate risk of losing current capabilities, actively capture 25 years of legacy system knowledge, and migrate the "as-is" critical business process support to a systems foundation that is supportable and expandable. The ECASS Redesign project consists of redesigning the ECASS Legacy system using a current service-oriented architecture technology platform and migrating existing ECASS functionality and data from ECASS Legacy to the new ECASS Core System.

When complete, the ECASS Redesign project will ensure that BIS is able to continue to support its mission critical functions, specifically processing more than 28,500 requests for export licenses, re-export licenses, and commodity and encryption classifications per year. ECASS Redesign includes export enforcement and anti-boycott information reports and assessments, and provides export data to external federal agencies. In addition, the project will enable BIS to improve security and data integrity, and productivity, by virtue of a soundly designed system which uses current standards-based software and hardware technology platforms and application architecture.

The BIS initiative in FY 2011 proposes to address the need to apply enabling technology that has emerged over the past decade to re-engineer BIS business processes. It also supports the Presidential directive to reform the U.S. export control system to enhance the national security, foreign policy, and economic security interests of the United States in the recommendation to create a single information technology (IT) system to manage export licensing. The Department of Commerce fully supports this recommendation and in response has halted the ECASS (2000+) Redesign development, modernization and enhancement activities. ECASS (2000+) Redesign has been restructured to utilize the Department of Defense's USXPORTS license analyst system,

as the first step in the process of migrating to a single IT system for the export licensing agencies currently in the Departments of Commerce, State, Defense, Energy and Treasury.

Patent Systems Modernization

The Patent End-to-End (PE2E) system will enable patent business customers to create, and USPTO internal users to process, electronic patent applications and follow-on papers more easily and accurately; reduces time required for processing and responding to customers; automates routine patent formalities tasks so that patent examiners can focus on the intellectual aspects of examination; and continuously improves quality throughout the processes. By implementing PE2E, the USPTO will reduce contractor costs, eliminate lost paper files, improve workflow tracking, and automate many support functions to yield a higher quality product.

A previous development effort, the Patent File Wrapper (PFW) project initiated in 2004 culminated in the 2008 deployment of capabilities to support the Transfer Inquiry (TI) business function. All subsequent phases of PFW were then placed in a “time-out” because of poor system performance and other technical and contractual concerns. Shortly thereafter, USPTO financial constraints forced the termination of the program.

Planning for the replacement PE2E systems began in 2009. PE2E will represent a wholesale change in the approach to patent modernization, notably because it will be based on an Agile Development Methodology and recent technological advances such as Cloud Computing. The current schedule calls for prototyping to start in FY 2011, followed by iterative development aimed at deployment of initial production capabilities in FY 2013.

IT Security Program

The security of IT systems is an area of priority throughout the Department. Recent audits by the Office of the Inspector General (IG), coupled with revealing internal compliance reviews by the Departmental OCIO and self-assessments by all Commerce operating units, have highlighted the need for improvements in Commerce’s IT security management and implementation, especially in the area of ensuring quality documentation and repeatable processes in support of Certification and Accreditation activities. Specific actions to date include developing repeatable processes for the conduct and documentation of system Certification and Accreditation activities, increased testing of contingency plans for the Department’s IT systems, implementation of secure configurations for most IT systems, regular compliance reviews and vulnerability testing, and institutionalized IT security training that includes annual refresher training for all Commerce computer users and role-based training for those with significant IT security responsibilities. Although this area remains a special management concern and continues as a material weakness, the situation is being closely monitored by the CIO and IG.

Appendix A: Enhanced Capabilities in the Analysis of IT Investments and IT Assets

Bureau of Economic Analysis (BEA)

BEA continues to refine its Capital Planning and Investment Control (CPIC) process each year as part of its strategic IT planning process. The CPIC process links BEA's strategic and operational goals to specific program initiatives in the Bureau Strategic Plan and Strategic IT Plan (SITP).

The baseline for BEA's strategic IT planning, budgeting, and architectural process is BEA's Strategic Plan, which includes the Bureau's four strategic objectives. From these four strategic objectives, the OCIO has developed four supporting IT Strategic Objectives (ITSOs) under which specific IT strategies, initiatives, and target investments are proposed for each fiscal year. These four ITSOs correspond directly to the four architectural layers in the Federal Enterprise Architectural model. This facilitates the ability of OCIO to meet the ITSOs, the Bureau's strategic objectives and the Bureau's target enterprise architecture goals each year. Each year, the IT Executive Steering Committee (ITESC) reviews BEA's ITSOs and their respective IT investments to determine how well they support BEA's mission. The ITSOs and associated investments are then incorporated into BEA's Strategic Plan, SITP, Operational IT Plan (OITP), and Enterprise IT Architecture (EITA). The OITP describes in detail the current year's IT activities and processes in support of BEA's mission, vision, goals, and objectives. The EITA provides a blueprint for the ongoing process of aligning information and emerging technologies with the business goals of the Bureau. This blueprint details the relationships between mission functions and BEA's investments in hardware and software.

Ongoing executive management oversight of IT investments is provided by the OCIO and the ITESC. The ITESC meets weekly or as needed for pertinent IT issues to be presented, discussed, and reviewed. In accordance with BEA's established IT investment review procedures the ITESC reviews and approves all large projects that require significant investment (\$250,000 or more) or commit BEA to a particular technology or a change to current architectures. If projects do not meet these criteria for ITESC review, they must be reviewed and approved by the CIO. Biweekly highlights, which include updates to projects, are sent to all ITESC members.

Census Bureau

GAO completed an audit and assessment of Census Bureau Information Technology (IT) management practices. The GAO was asked to provide an IT profile of the Census Bureau, and evaluate the adequacy of the Census Bureau's IT policies, procedures, and practices in the areas of information security, human capital, system development, and investment and EA management.

The GAO found that the Census Bureau had a decentralized approach to IT management. The IT Directorate, led by the Chief Information Officer (CIO), is responsible for establishing IT policy and strategies, and multiple program directorates are responsible for implementing policies and managing IT systems and staff. The CIO has recommended that the Operating Committee (OC) and the IT Governing Board (ITGB) act as the Census Bureau's IT Investment Management (ITIM) oversight boards. With input from the program directorates, the CIO and

ITGB will make recommendations to the OC, which will decide whether to begin new IT initiatives or fund current IT investments. For new initiatives, project sponsors present fact sheets to the OC that list the strategic goal(s) supported, define the need and the concept, and provide a cost and schedule estimate.

The GAO also found that the Census Bureau has established policies and procedures and initiated key practices in many areas important to successful IT management. However, many key practices are not performed fully and consistently. As a result, the Census Bureau is at increased risk of inadequate management of its major IT investments and is more likely to experience cost and schedule overruns and performance shortfalls. The GAO recommended that the Census Bureau improve its ability to manage IT effectively by addressing weaknesses found in each management area reviewed.

The CIO has initiated improvement efforts, including redefining the CPIC process using the GAO recommended Select, Control, Evaluate methodology, to establish policies and procedures to manage IT. This will allow the Census Bureau to move in the direction of portfolio management.

The Census Bureau has developed an updated CPIC process, approved by the CIO in April 2007. In response to Departmental Administrative Order (DAO) 201-45, the Census Bureau Deputy Director tasked the Senior Advisor for Project Management to establish an investment review board (consisting of the senior program managers and chaired by the Deputy Director) that will conduct programmatic reviews of Census Bureau investments. This board will help ensure consistent program management throughout the Census Bureau. In FY 2009, the Senior Advisor for Project Management began the process of documentation development, which will continue in FY 2010. Throughout this process, the CIO will work with the Senior Advisor for Project Management and the board to more effectively manage IT investments.

The Census Bureau currently is operating at a self-assessment Level 4 in the IT Planning and Investment Review Maturity Model. The Census Bureau intends to obtain a Level 5 rating by September 30, 2011.

Economic Development Agency (EDA)

EDA has had an active IT planning process in place for several years, and follows a formal investment review process. EDA develops and manages its IT budget centrally, with direct oversight by the Chief Information Officer, and through collaboration with the Chief Financial Officer and Chief Operating Officer. The CIO prepares the agency IT budget and submits it for review and concurrence by the members of the EDA Information Technology Review Board. The Board monitors project status and performance, and recommends corrective action on projects when necessary. Through this oversight and management, EDA works to improve the quality of its business cases and to demonstrate effective management of its IT program, keeping costs within an established budget baseline. Both Office of Information Technology (OIT) team leaders have extensive training in project management; one also maintains current training related to Contracting Officer's representative appointments. IT project managers continue to improve their efficiency and performance through their management experience, through training opportunities, and through collaboration with other managers throughout the Department on common goals and consolidation projects. Through this collaboration, EDA has excelled in reaching and maintaining many of the new standards set forth by the Department and OMB.

National Oceanic and Atmospheric Administration (NOAA)

NOAA has implemented a Planning, Programming, Budgeting, and Execution System (PPBES) as a component of its IT portfolio management process. NOAA's PPBES and the CPIC process are integral to the entire portfolio planning process and serve as primary tools in the management of all NOAA IT investments.

NOAA's Portfolio of IT investments is structured such that a clear linkage exists between each IT investment and one or more of NOAA's strategic goals. The analysis of every NOAA IT investment is conducted with a view toward the strategic goal supported by the investment. This serves to ensure that investments in IT resources provide a direct and focused contribution to NOAA's ability to accomplish its mission goals. To maintain this mission-oriented focus, each of NOAA's mission goal teams includes a NOAA line office CIO as an active voting member.

After a mission goal team has fully developed a concept for a proposed new IT investment initiative, the agency-wide NOAA IT Review Board (NITRB) reviews the investment proposal for approval and possible further recommendation to the Department of Commerce Investment Review Board. NITRB reviews focus on the business case for the proposed investment, including the performance measures to be instituted and the strategic fit of the investment within NOAA's overall IT investment portfolio. The NITRB also evaluates proposed investments for compliance with the performance-based management, IT security, risk assessment, and enterprise architecture requirements of OMB's Circular A-11. To gain NITRB approval, a proposed IT investment must also demonstrate full life cycle cost planning and, where possible, represent an approach to an enterprise solution rather than a "stove pipe" process.

National Institute of Standards and Technology (NIST)

NIST is continuing its efforts to manage the boundaries of its IT portfolio. This work continues NIST's efforts to manage its IT assets in an enterprise-oriented view covering all NIST IT assets. This enterprise-oriented view allows NIST's IT management to better define the features that comprise various specific IT investments and how those investments will be managed. This effort continues to result in the lowering of the number of NIST systems from a high of 112, to the current 55. This reduction has helped improve the NIST CPIC process by providing a consistent mechanism for organizing approval submissions and managing those submissions as they move through the approval and review process. NIST has continued using an automated process to submit procurement requests for CIO review and approval of IT development services. This has enabled the NIST CIO to better manage the development or enhancement of systems in the NIST IT portfolio, both within the administrative and the research organizations of NIST. NIST is now applying its new IT architecture review process to apply a more consistent set of review criteria in the determination of how proposed IT system developments or enhancements will fit within the context of the NIST IT technical architecture.

Appendix B: Department of Commerce Advisory Groups

As Commerce has continued its work toward fulfilling its various strategic goals, we have maintained a focus on innovation; attempting to develop a complete understanding of the needs of our customers, business partners, and stakeholders. This focus on innovation allows us to identify both efficiencies and gaps in services, and to identify solutions that are as comprehensive as possible. Additionally, we strive to find ways to incorporate our users' understanding and acceptance into the concept and development phases of our business processes. One concept that we have incorporated in accomplishing this goal is the use of advisory and other groups. These groups, made up of technical and program representatives from the DOC operating units, are tasked with addressing specific IT-related challenges facing the Department.

The fundamental idea behind forming advisory and other groups is that those involved in providing particular services are in the best position to make decisions about how to coordinate, implement, and improve them. The group is able to synthesize greater knowledge as to what has worked well, what hasn't, and what problems can occur. By drawing on members from all areas of Commerce, the group is better able to understand the needs of our customers, business partners, and stakeholders and to devise effective and efficient ways of meeting those needs.

Commerce has utilized advisory and other groups to develop, recommend, or facilitate technical solutions in a number of areas. These groups are formed as a need arises and are typically disbanded when a technical solution is in place, fully operational, and no longer in need of continual maintenance attention. Groups that have completed their work include the Contingency Planning Advisory Group, which published a comprehensive guide to business continuity planning, and the Electronic Forms Advisory Group, which published a Web site of Commerce and government-wide electronic forms. Groups that have largely completed their work, but continue in an advisory capacity, include the Accessibility Coordinators Group, which published Commerce's policy addressing accessibility under Section 508 of the Rehabilitation Act and continues to monitor accessibility activities within Commerce and elsewhere, and the Information Quality Task Force, which published Commerce's Information Quality Guidelines, provides advice to operating units that receive requests for corrective action, and submits annual and ad hoc reports to the Office of Management and Budget on information quality activities. The Information Quality Task force also continues to respond to the OMB Peer Review Bulletin and maintains an agenda of peer review plans. A list of Commerce's Significant Guidance Documents and Good Guidance Practices are listed on our [Web site](#), along with information to allow the public to submit comments or make requests relative to our guidance documents.

Advisory groups currently operating within Commerce include the following:

Commerce Chief Information Officers Council

The CIO Council, chaired by the Department's Chief Information Officer, is the CIO's principal forum to promote effective IT practices throughout the Department and to share information of a cross-cutting nature. The CIO Council provides all of the Commerce CIOs with an opportunity to leverage their colleagues' experience by sharing best practices, insights, ideas, and innovative solutions to problems. The Council meets at least monthly and is composed of the operating

unit, well as NOAA line office, CIOs. The CIO Council has the authority to establish standing committees and working groups as necessary to address areas of concern of the Council (e.g., Enterprise Architecture Advisory Group, Information Technology Security Steering Committee).

Commerce IT Investment Review Board (CITRB)

The CITRB acts as a board of directors that advises the Secretary and Deputy Secretary on critical IT matters. The CITRB ensures that proposed investments contribute to the Secretary's strategic vision and mission requirements, employ sound investment methodologies, comply with Departmental systems architectures, employ sound security measures, and provide the highest return on the investment or acceptable project risk. The advice provided by the CITRB supports IT management improvement goals of the Clinger-Cohen Act of 1996 (CCA) and the Paperwork Reduction Act of 1995 (PRA) as well as related implementing regulations and guidance.

Information Technology Security Coordinating Committee

The Information Technology Security Coordinating Committee (ITSCC) is chartered by the Departmental CIO and serves as a Department-wide forum for addressing issues and making recommendations related to IT security responsibilities and activities. The ITSCC provides a forum for discussion of issues, has formed working groups to address specific IT security issues, and provides recommendations concerning IT security throughout the Department. The ITSCC has also proven to be a fruitful training field for new IT Security Officers and a source of continuing education for current IT Security Officers. The ITSCC meets on a monthly basis and often serves as the impetus for new IT security-related initiatives.

Federation of Computer Incident Response Teams (CIRT)

Commerce has established a Department-wide forum for the development of incident response capability procedures, responsibilities, and activities that will be used within DOC to establish the Federation of Computer Incident Response Teams (CIRT) structure and address issues pertaining to computer incident and response services. Within Commerce, this Federation of CIRTs consists of the formally designated Commerce incident response capabilities. The information sharing enables analysis of Department-wide threats as well as consideration of Department-wide solutions for incident detection and response. The Federation of CIRTs has established relationships with other incident response organizations, such as the US-CERT, and share relevant threats, vulnerabilities, or incident data.

Commerce Enterprise Architecture Advisory Group

An enterprise architecture is recognized by Commerce's CIO as an integrated framework for deploying and managing IT resources to support the strategic goals and mission business functions of the Department. The enterprise architecture is a means to achieve federal strategic and IT goals by integrating work processes and information flows through the use of technology. The architecture specifies standards that enable information exchange and resource sharing. To ensure that this information exchange and resource sharing are maximized throughout the Department and that our operating units are able to make maximum use of a "blueprint" that explains and guides our organization's IT and information management elements, the Department has chartered an Architecture Advisory Group.

The Department's Architecture Advisory Group serves as a Department-wide forum for addressing issues related to the implementation and use of enterprise architectures. The

Advisory Group reports to the CIO Council and serves as technical counsel to the Commerce CIO and the CIO Council on the subject of enterprise architecture. It is viewed by the CIO Council as a resource to assist the various operating units in the development of consistent enterprise architecture(s) throughout the Department.

The DOC Architecture Advisory Group is specifically tasked to make recommendations and provide advice with respect to policy, procedures, standards, and payoff as they relate to the development, maintenance, and evolution of the Department's enterprise architecture(s). This tasking has, to date, included activities to:

- Make recommendations and provide advice to the DOC CIO and the CIO Council with respect to policy, procedures, and standards related to the maintenance and update of the enterprise architecture;
- Manage development and acquisition of a unified EA management system tool for DOC and promote its use throughout the DOC, as specified in the DOC Technical Reference Model (TRM);
- Coordinate the interface between the Department's EA management system tool and OMB's Federal Enterprise Architecture and the related five Reference Models (Business, Service Component, Technical, Performance, and Data);
- Recommend technologies that may serve as "foundations" for Department-wide systems;
- Carry out tasks specifically assigned by the CIO or the CIO Council; and
- Identify improved architectural practices and promote their adoption throughout the Department.

Web Advisory Council

The Web Advisory Council (WAC) provides advice to the CIO, CIO Council and Commerce public affairs offices on matters that address use of the World Wide Web, Social Media, and Web 2.0. The WAC is co-chaired by the Office of the CIO and the New Media Director of the Office of Public Affairs; its membership includes staff from both the CIO and public affairs communities. Because use of the Web is central to Commerce's e-government activities and the principle of Open Government, innovative, but careful use and management of Commerce's Web sites is critical to the success of our e-government strategy. The WAC has published a series of policies addressing such Web issues as privacy, accessibility, domain names, and identification of Web site owners, endorsement disclaimers, and content management. Additional policies are under development.

Appendix C: Major IT Initiatives in the Department of Commerce

DEPARTMENTAL CROSS-CUTTING INITIATIVES

Commerce Green IT Plan

Commerce's Strategic Sustainability Performance Plan (SSPP) of June 2010 is a testament to the Department's commitment to IT energy management. Commerce's Green IT Plan builds on the SSPP.

The Green IT Plan expands on Goal 9 of the SSPP, Electronic Stewardship and Data Centers, to include additional information, in particular energy saving initiatives undertaken by individual Commerce operating units. The amendments to Goal 9 specify by operating unit, activities past, ongoing, or planned for FY 2010 - FY 2012 to reduce IT energy consumption. These include the following:

- desktop power management,
- improved power management for servers and data center equipment,
- increased or new use of virtualization of servers,
- improvements in infrastructure that provide more efficiencies (e.g., cooling systems upgrades in data centers),
- printer reductions or upgrades,
- data center consolidation, and
- procurement improvements.

Commerce is well on the road to achieving the goal to reduce IT energy consumption by a minimum of 30% from FY 2010 – FY 2012. Commerce has already achieved considerable, documented savings through power management of its desktop computers.

Homeland Security Presidential Directive 12 – Federal Standard for Secure and Reliable Forms of Identification

In response to the August 27, 2004, [Homeland Security Presidential Directive 12 \(HSPD-12\), Policy for a Common Identification Standard for Federal Employees and Contractors](#), the National Institute for Standards and Technology (NIST), an operating unit of the Department of Commerce, developed [Federal Information Processing Standards Publication \(FIPS Pub\) 201.1](#), including a description of the minimum requirements for a federal personal identification verification (PIV) system. HSPD-12 directed the promulgation of a federal standard for secure and reliable forms of identification for federal employees and contractors. It further specified secure and reliable identification that—

- Is issued based on sound criteria for verifying an individual employee's identity;
- Is strongly resistant to identity fraud, tampering, counterfeiting, and terrorist exploitation;
- Can be rapidly authenticated electronically; and
- Is issued only by providers whose reliability has been established by an official accreditation process.

Government enterprises have always required employees to carry cards or badges that verify the employee's identity and allow the employee to access enterprise resources. However, changes in both the regulatory environment and the amount of risk that enterprises face from unauthorized access are driving Department heads to reevaluate their identity management practices. How should a potential employee's identity be verified? How can agency security elements ensure that only authorized employees have access to facilities, enterprise networks, and computers? How can authorized employees use their identity credentials to access enterprise resources easily and efficiently? How are employee entitlements, to the work place and IT systems, handled on an enterprise bases.

The HSPD-12 PIV-II cards contain unique security characteristics which can be leveraged to identify a trusted user in an electronic transaction. Identity access management security controls place standard authentication and access mechanisms in front of computer systems, applications, and databases allowing only "trusted identities" through the barrier. Identity management security audit controls help to identify usage patterns and can be used to identify rogue behaviors. Identity management security controls include automated account management that highly increases business process speed to review and grant access rights (or revoke them). Identity management technology can automatically build user accounts pointing to a central "self help" location from which users can request new access rights, as a by-product of putting someone into payroll or personnel management systems.

In accordance with the Office of Management and Budget (OMB) guidelines, the next step, after card issuance, for all executive departments and agencies will be to use the PIV standards for granting access to federally controlled facilities (physical access) and federally controlled information systems (logical access). The Department is in the final phase of PIV-2 card issuance and has established a task force and brought in contractor support to develop an implementation plan for logical and physical access to IT system and Commerce building. The Department will take a risk based approach for a controlled, managed, phased migration to HSPD-12 requirements. Currently underway, phase 1 of this approach focused first on establishing the personnel identity verification program and underlying processes. Phase 2, planned for FY 2011, will involve an enterprise level assessment of existing Commerce infrastructure and business processes with the aim of identifying focused improvements in access and authentication systems. This will be followed in FY 2012 by: pilot projects and acquisition of necessary infrastructure, including card management systems, card readers; and development of standard, reusable back-end interfaces to Commerce IT systems. Installation of the technical infrastructure components will be tested in accordance with the Commerce certification and accreditation process. Implementation will be deployed first for access to high-risk facilities and for authentication to non-national security core system components determined to be of a High security category (as determined by application of Federal Information Processing Standard 199 criteria).

Commerce has a variety of data repositories, applications, and different computers and operating systems on which they operate. This can be a challenge from the operations and maintenance perspective, including patch management and licensing. That may require a diverse set of skills from different administrators with super accounts, and/or product vendors with external access who keep the computers running, enhance the applications, and staff key support functions. Some system owners make day-to-day decisions about who should get access, and manage that access to their applications and systems. This process can be cumbersome, costly, and very time

consuming. Are we expending the proper resources in the right way to verify legitimate users, screen access request, monitor every access attempt, and prevent conflicting access based on the user's role?

An enterprise approach to identity and access management can help Commerce utilize the security principle of "least privilege" by limiting the overall view of data to small portions of the workforce, and controlling security access at this level. The primary goals of protecting agency assets, is to know who has access to what assets, at any given time of the day. In addition to knowing this, we must be able set standardized policy across our environment, and have the capacity to monitor user activities.

A comprehensive central authentication and access control solution used across all applications and systems, and all users within bureaus or the Department can help monitor and control agency information, limit insider threat and systems access; identify inactive or "orphan" accounts; manage individual entitlements; and, sort out "toxic combinations" of user access that could allow someone to create, then approve a potentially harmful transaction.

IPv6 Planning and Implementation

IPv6 has been incorporated into the DOC enterprise architecture (EA) and the incorporation of IPv6 capability into new or upgraded IP-based technologies is a criterion for Commerce Investment Review Board (CITRB) approval of all DOC Information Technology (IT) capital investments. Department of Commerce action toward internal implementation of IPv6 is focused primarily on our role as a customer of developing, market-driven IPv6 technology. The DOC Office of IT Policy and Planning, in coordination with the Office of Information Security, Infrastructure, and Technology, is leading in the Department-wide IPv6 planning and implementation.

Trusted Internet Connection (TIC)

The implementation of Trusted Internet Connection (TIC) within the Department of Commerce is driven by the Strategic IT goals the Department has established at the OCIO level in direct support of the Department's strategic goals and objectives. Through its participation in the TIC initiative, Commerce will optimize its use of the Internet by eliminating redundancies and ensuring efficiencies while still providing new and more efficient services to our customers. The Department will greatly enhance its security posture in the next few years by reducing the number of potentially-vulnerable connections to the Internet. The Department has developed a TIC consolidation and implementation plan that aligns with the Department's IT infrastructure optimization and consolidation strategies by the end of FY12. Commerce is utilizing the GSA Networx contract to support its TIC architecture for the majority of its operating units, with NOAA separately operating as their own Trusted Internet Connection Access Provider (TICAP).

Commerce Business System (CBS)

The Department of Commerce (DOC) maintains a Federal Financial Management Improvement Act (FFMIA) compliant financial management system, the Commerce Business Systems (CBS). CBS replaced non-compliant legacy financial management systems within DOC. As of October, 2003, CBS was fully implemented for eleven Department of Commerce bureaus. Upon implementation of CBS at the International Trade Administration's financial system of record in October 2007, all DOC bureaus except the U.S. Patent and Trademark Office and the National Technical Information Service use CBS as their financial system of record.

During FY 2007, the Office of Financial Management/CBS Solutions Center (OFM/CSC) successfully migrated CBS to Web-based software architecture (Oracle 10g) and expanded the Fund Code Field to 4 digits. This utilization of the Oracle Portal technology simplified and consolidated access and password management. During FY 2009, the Bureau of the Census, National Oceanic and Atmospheric Administration, and the National Institute of Standards and Technology successfully migrated their production instances of CBS from Oracle client server architecture to a Web-based application built upon Oracle 10g. As a result, the life expectancy of CBS is extended to 2023, with at least one upgrade to a later version of Oracle.

CBS provides reliable and timely information within a sophisticated security infrastructure. The system is capable of producing both financial and budget reports from information generated within the financial management system. CBS consists of a Core Financial System including the Commerce Purchase Card System and the Budget and Execution Data Warehouse. CBS is interfaced with the Commerce Standard Acquisition and Reporting System (CSTARS), the National Finance Center Payroll System, and the Automated Standard Application for Payments.

Under the Federal Financial Management Improvement Act (FFMIA) of 1996, the DOC is required to have financial management systems that comply with federal financial management system requirements, federal accounting standards, and the U.S. Government Standard General Ledger at the transaction level. CBS, in conjunction with the Corporate Database – a commercial off-the-shelf software package for consolidating financial data and producing financial reports – brings DOC into compliance with FFMIA. CBS also enables the DOC to meet the requirements of the Chief Financial Officers Act and Office of Management and Budget Circular A-127.

CBS streamlines processing, minimizes administrative costs, and provides managers at all levels with necessary, accurate, and real-time financial information. As an integrated financial management system, CBS provides the necessary financial controls and functionality which has enabled the Department to achieve its goal of receiving an unqualified audit opinion for all of DOC for the past eleven years.

During the first quarter of FY 2010, the OFM/CSC Development and Test instances of CBS were migrated to the OMB-designated Shared Service Center, Department of Transportation/Federal Aviation Administration/Enterprise Services Center in Oklahoma City, Oklahoma. Each of the bureaus – Census, NIST and NOAA – maintain Development, Test and Production instances of CBS at their data centers.

The OFM/CSC maintains a vigorous management control and project review process to plan and control operations and maintenance activities. These processes include:

- Management oversight by the CBS Executive Board. The Board provides strategic management for CBS and prioritization and strategic alignment for business and administrative systems and initiatives that interface with CBS;
- Bureau CBS Program Managers who are responsible for the operation, maintenance, and support of the CBS software for their respective bureaus;
- An Activity Request Change Control Board consisting of OFM/CSC and bureau customers who meet on a weekly basis to review all projects that impact CBS and bureau development and testing resources and develop initial priorities at the lowest level within projects, based upon guidance from the Bureau Program Managers; and

- Development of and updates to the CBS Capital Asset Plan and Exhibit 300 to support budget justifications and reporting requirements for this investment.

Future plans include the following:

- Continuation of the Business Transformation and Integration (Modernization Blueprint) program, focused on maintaining a comprehensive inventory of programs, initiatives, and systems across the Office of the Chief Financial Officer and Assistant Secretary for Administration (CFO/ASA), in order to enable the Department's managers to perform better analyses of programs and initiatives that are underway or planned through FY 2013.
- Maintenance and possible enhancements to the OFM/CSC portal that provides a unified gateway for access to Department administrative applications, including single sign-on and self-service administration, as well as hosting the Business Transformation and Integration (Modernization Blueprint program).
- Finalizing the Future Financial and Administrative Planning Business Analysis to assist the Department in analyzing its current financial and administrative environment, determine the long-term viability of its CBS platform, and compare to other potential options to support its financial management environment.
- Standardizing the CBS operating system and hardware platform for the three bureaus – Census, NIST and NOAA – and the OFM/CSC. On June 15, 2009, the CBS Executive Board approved the selection of Oracle/Sun Solaris for the next generation CBS Operating System Platform. DOC expects that implementation will begin in FY 2012. The business drivers for this initiative include:
 - Standardization. A common operating system and hardware platform across all bureau instances of CBS which will result in near-term benefits, including software support and efficiencies in the software development lifecycle.
 - Scalability/Growth. The ability to expand and accommodate future growth of the CBS application.
 - Vendor Support. The ability of the DOC or bureau to acquire outside vendor support of hardware and software and the confidence that support will be available.
 - Manageable/Predictable Costs. The ability to predict and manage costs associated with the hardware/platform selected.
 - Robustness/Reliability/Serviceability. The ability of the hardware/platform to provide a robust, reliable and serviceable solution for CBS.

Commerce Business Environment (CBE)

The Commerce Business Environment (CBE) program was embraced by Commerce in 2004 as a key component of our revised acquisition management vision. As a part of our architectural design to reduce redundancies, streamline operations, and ensure consistent security, the CBE is an evolving approach to the integration of acquisition management systems. The bottom-line goals of the CBE are to assist Commerce's operating units' compliance with sound acquisition practices and to enhance efficiency, transparency and customer service.

The overall DOC Acquisition System Goals of the CBE program are as follows, in priority order:

- **Improve the quality and timeliness of acquisition activities by increasing processing and reporting efficiency;**
- **Provide a user-friendly interface.** Provide an intuitive and user-friendly interface that minimizes the need for ad hoc “workarounds” and minimizes need for intensive or repeated user training;
- **One acquisition system to handle all end-to-end lifecycle activities.** Implement a modernized, integrated system that streamlines and standardizes business processes and all acquisition activities;
- **Achieve interface with the Core Financial System.** Interface acquisition functions with CFS to meet clean audit and new transparency requirements while not detracting from CFS efficiency. Do no harm to CFS;
- **Compliant with all federal legislation and mandates.** Meets all legislative requirements while leveraging existing e-Government resources;
- **Consolidate acquisition data.** Provide improved reporting capabilities by centralizing data repositories;
- **Interface one production instance of an enterprise-wide procurement system with three instances of the Core Financial System.** Replace the existing three procurement instances of CSTARs with a single enterprise-wide procurement system that is still interfaced with the three separate instances of CFS. A single instance is expected to reduce cost redundancies and improve the enterprise-wide view of procurement data;
- **Utilize Commercial Off-the-Shelf (COTS) products.** Identify mature, best of breed products to provide a solution that is based on best practices; and
- **Enhance Security.** Meet all federal and agency-wide security policies including the DOC Office of IT Policy and Planning guidelines.

The CBE comprises a number of functional acquisition systems, including the following:

Commerce Standard Acquisition and Reporting System (CSTARs)

The Department’s current acquisition system of record, CSTARS, is the DOC acquisition system for handling all end-to-end lifecycle activities. Initially approved in 1999, CSTARS is an enterprise-wide, IT-enabled tool, used by the Department’s acquisition professionals to acquire products and services. Powered by a COTS software package, this system provides the functionality needed by the contract office staff and management to fulfill procurement requirements. CSTARS is interfaced with the CBS Core Financial System (CFS) through an Enterprise Application Integration (EAI) product—TIBCO. The interface, Obligation and Requisition Standard Interface (ORSI), helps support clean financial audits and alignment within the DOC enterprise architecture lines of business and services.

Since CSTARS became unsupported by the COTS provider in 2007, the ultimate goal of the DOC acquisition system project is to modernize the current system, ensure compliance with pertinent government-wide legislation and maintain

interoperability with internal DOC systems and other federal initiatives. To continue achieving this goal, CSTARS will need to be migrated from the current client-server environment to a Web-based environment.

C.Request

C.Request, in operation since 2006, is the Web-based requisitioning system used by the Department's Office of the Secretary, the National Institute of Standards and Technology, the National Oceanic and Atmospheric Administration, and the Bureau of the Census. C.Request, like CSTARS, is interfaced with the CBS Core Financial System. C.Request allows for data capture at the point of entry and the electronic routing of this data for review and approval.

Balanced Scorecard System (BSC)

The BSC is used to measure the performance of the Department's acquisition community. The BSC extracts quantitative procurement data from FPDS-NG and utilizes a survey tool to collect qualitative data regarding Commerce's acquisition activities. The qualitative and quantitative data are used to measure the accomplishments of the operating units within the acquisition community.

Integrated Acquisition Environment (IAE)

The emergence of the Internet as a platform for communication and the exchange of goods and services has transformed the way organizations interact with their business partners. The Commerce Business Environment is linked to the IAE to exploit its government-wide resources, thereby reducing the costs agencies would otherwise incur if they each duplicated the capability individually.

The government-wide systems accessed through the IAE include: Central Contractor Registration (CCR), Federal Business Opportunities (FedBizOpps), Wage Determination On-Line (WDOL), On-Line Representations and Certifications (ORCA), Excluded Parties List System (EPLS), FPDS-NG, and the Electronic Subcontracting Reporting System (eSRS). The integration of these information sources, through the IAE, builds on the framework of a shared services model where no single organization has "ownership"; rather the services are a constellation of capabilities built on standards and accessible via the Internet.

The availability of accurate, timely, and useful procurement information is critical to successfully fulfilling the Department's strategic mission. The intent of the CBE is linked directly with management's ability to make sound decisions and effectively utilize the resources at its disposal to do so.

The CBE program supports Commerce's Management Integration Goal and President Obama's technology directive of a more efficient, accountable, transparent, and creative government.

Office of Management and Organization IT Systems

The Office of Management and Organization (OMO) has one general support system, the Audit and Directives Management System (ADMS), OS-042, which includes three minor applications designed to increase efficiency in OMO's directives management, audit tracking, and GAO liaison functions:

Audit Tracking System (ATS)

ATS tracks audits and quality assurance reviews for various offices throughout Commerce, including senior management officials and their delegates. The purpose of audit follow-up is to ensure good management. The corrective actions taken by management to implement audit recommendations improve the effectiveness and efficiency of government.

GAO Tracking System (GAOS)

GAOS enables OMO to efficiently and effectively track the course of all GAO engagements involving the Department, in order to ensure that requirements for responses to inquiries and requests are met by established deadlines, and that actions have been appropriately coordinated with all involved parties.

Directives Management System (DMS)

DMS enables automated publication of DOC directives and includes databases of archived directives that are stored offline and current directives that are published to the DOC Web site.

OMO was part of the OS Business Systems Consolidated Migration. As a result, the ADMS was relocated to the Federal Aviation Administration (FAA) computer facility in Oklahoma City in FY 2010, along with the other OS systems participating in this project.

Office of Human Resources Management (OHRM) IT Systems

The Department of Commerce Human Resources (HR) community is in the process of selecting a new front-end human resources action-processing system. The current National Finance Center (NFC) system used by the Department's HR community is severely antiquated and in need of being replaced. Funding has been obtained in FY 2012 to acquire contractor support to modernize the system. This funding will provide staff and contractor support to assess and build custom requirements, evaluate vendors, select an HR LOB Shared Service Center provider, pay for licenses and maintenance, and procure a contractor to manage implementation.

MGS Hiring Application

The Monster Government Solutions (MGS) contract for the QuickHire application expired in August 2009; therefore, the Department pursued a new solution through the procurement process. The solicitation required that the system fully comply with all federal and DOC IT policies to include all aspects of security, planning and documentation, Section 508 compliance, and complete life-cycle data management. In addition, the solution had to provide a seamless flow between OPM's One-Stop and comply with and provide for all hiring options available under the Senior Executive, Merit Assignment, and Delegated Examining programs within DOC. The selected solution had to leverage and partner with our professional human resources staff to address each step of the hiring process, including:

- Identifying potential hiring challenges and providing timely solutions,
- Drawing the most highly qualified applicants to DOC positions from a diverse population, and
- Providing a complete battery of applicant assessment tools which provide for multiple levels of review and screening.

MGS was awarded a one base year contract (August 15, 2009 through August 14, 2010), with four optional years. The OHRM Automated Hiring Assessment Tool project supports Commerce's Management Integration Goal and the PMA goal of Strategic Use of Human Capital.

WebTA

WebTA is a Web-based time and attendance (T&A) system with an interface to the National Finance Center (NFC). WebTA allows employees to input their own time and leave data and provides them with the ability to submit electronic leave requests and validate timecards online. In FY 2004, OHRM deployed, as a pilot project within the Office of the Secretary, WebTA, a commercial off-the-shelf T&A processing system. In 2006, the OHRM finalized deployment of WebTA, successfully implementing it in all Departmental operating units.

One of the drivers in the selection of a Web-based T&A system was the need to support the roles and responsibilities of the main parties involved in timekeeping: the employee, timekeeper, and supervisor. WebTA has proven to successfully support each of these roles; employees can track their time by project and electronically request leave, timekeepers can accumulate payroll data by project and payroll category, and supervisors can approve leave requests and certify timecards online. The WebTA application is also compliant with the Office of the Secretary's enterprise architecture, the goal of which is to have information accessed (both locally and remotely) through Web-enabled processes running over secure, high-speed communications lines and to achieve more efficiencies and higher levels of integration and interoperability. WebTA achieves this and more as it improves service delivery to clients (i.e., desktop delivery), improves efficiency and data access for clients (via Internet access from any location 24 hours a day, 7 days a week), assists in modernizing the human resources (HR) information system infrastructure, and supports the HR organizational culture.

Further, since WebTA is a table-driven application, it has allowed the Department to quickly implement enhancements to accommodate changes in regulations, such as those required under the Federal Workforce Flexibility Act of 2004, and to track highly visible programs such as telework. The Department continues to improve WebTA as IT environmental threats and security issues develop. For example, as the Department moved to ensure full protection of Personally Identifiable Information (PII), WebTA was modified to remove the display of social security numbers and accompanying policy was implemented to limit access to PII under specific conditions.

Faced with the final option year of the current contract for operation and maintenance (O&M) of WebTA (expiring mid-month of September 2009), OHRM was tasked with finding a replacement system or justifying the sole-source acquisition of O&M from the current WebTA vendor. We conducted market research to determine if there were any other products with the proven capabilities and experience in federal timekeeping requirements to meet the Department's needs. Two federal agencies offered T&A systems; however, neither of them had the interface with NFC which is a fundamental requirement of the Department. We also conducted a search of the GSA Schedule to determine which products were used to capture T&A data. There were two vendors on the GSA Schedule that offered T&A systems to federal clients. Both vendor quotes included the leasing of licenses, application hosting, and O&M. However, the quotes far exceeded the Department's budget parameters (over one million dollars) and since the Department owes its WebTA user licenses and did not require hosting, these options were not

viable. Any replacement system was required to fully comply with all federal and Departmental IT policies; including all aspects of security, planning and documentation, certification and accreditation, life-cycle data management, and Section 508 compliancy requirement. The system was also required to incorporate numerous Commerce and bureau-specific time and attendance accounting requirements, potentially escalating costs above the current WebTA O&M costs. For these reasons, it was determined that the WebTA system offered by the current vendor was the only “unique” source to meet the Department’s requirements, and the Department was precluded from competing this requirement due to the proprietary character of the software.

Our continuing challenge is to ensure that the Department fully avails itself of WebTA IT capabilities, including interfacing with administrative systems and utilization of consolidated data while containing costs. Because the WebTA consolidated database contains data unavailable from any other source, this robust data source must continue to be used to support other administrative systems (e.g., the Commerce Learning Center use of WebTA to extract employee e-mail addresses and the hierarchical supervisory/employee relationship data, etc.) and to leverage this unique data source to achieve efficiencies and savings.

The WebTA project supports Commerce’s Management Integration Goal and the President’s Management Agenda goal of Strategic Use of Human Capital.

Commerce Learning Center

Commerce has implemented a new Commerce Learning Center, powered by Learn.com. The Commerce Learning Center serves as the portal site to deliver and track career development activities for all agency employees. It utilizes learning management tools and targets curriculum based on both individual and agency needs. The Commerce Learning Center allows the agency to focus training efforts on specific needs and match employee professional and individual development to courses and services.

By providing on-demand e-learning tools and services and training data management, the agency is better able to attract, retain, manage and continuously educate the highly skilled professionals needed for a flexible and high-performing workforce.

The Commerce Learning Center project supports Commerce’s Management Integration Goal and the President’s Management Agenda goal of Strategic Use of Human Capital.

Electronic Official Personnel Folder (eOPF)

eOPF is a system developed as a component of the United States Office of Personnel Management (OPM) Enterprise Human Resources Integration (EHRI) initiative. It was developed as a management solution to handle official personnel files and to simplify access to Official Personnel Folder (OPF) within Commerce and across the federal government at all levels (from front-line employee to senior management). The OPF contains Human Resources (HR) records and documents related to federal civilian employees. An OPF is created when an employee begins federal service and is maintained throughout the employee’s career in accordance with OPM regulations.

The eOPF provides electronic, Web-enabled access to OPF for all employees, supervisors, and HR staff members to view eOPF documents. All employees are able to view their own OPF through the eOPF Web interface. The eOPF also allows supervisors to have view-only access to specific documents contained in the eOPF of employees who report directly to them.

Within Commerce, deployment has been completed in all operating units (though many bureaus have not yet enabled employee access to eOPF) except for the Census Bureau, and deployment within Census is expected in 2012. Census continues to utilize the paper OPF.

eOPF will support Commerce's Management Integration Goal and the President's Management Agenda goal of Strategic Use of Human Capital.

eOPF has security measures in place to ensure the integrity of the system. For example, users are able to view their own eOPF documents, but cannot modify the documents. Additionally, all activity performed in the eOPF is logged and can be accessed through various reports.

Herbert C. Hoover Building Infrastructure Network (HCHBNet)

DOC commissioned a study of the telecommunications network environment in the Herbert C. Hoover Building (HCHB). This study found that there were approximately 100 individual networks serving the 4,000 users within the building. These heterogeneous, and in some instances, incompatible networks were the result of development and installation efforts conducted by autonomous operating units, working independently. As a result of this study, DOC developed a telecommunications improvement plan, which resulted in a design recommendation for a consolidated network infrastructure for the HCHB. This design recommendation, now known as the HCHBNet, was vetted by all the operating units within the building, refined to meet a comprehensive set of telecommunications needs, and approved by DOC executive management.

DOC received approval and funding for the construction of HCHBNet, and the basic backbone connectivity of HCHBNet was completed in December 2002. All operating units at the HCHB except for the International Trade Administration have migrated onto HCHBNet.

The HCHBNet incorporates a state-of-the-art IP-based telephone system, an emergency broadcast system to alert HCHB occupants to developing emergency-situations, a public address capability, and a closed circuit security camera system. The incorporation of Voice-Over-IP telephony, emergency broadcast capability, and closed circuit camera security system has already saved the American taxpayers many thousands of dollars because these functions were deployed using the existing cable infrastructure and maintenance services capability.

HCHBNet faces several challenges in the years ahead. One of these is the conversion from Internet Protocol Version 4 (IPv4), currently used throughout the Internet, to Internet Protocol Version 6 (IPv6). All existing devices on HCHBNet are IPv6-compliant, and Commerce has instituted a requirement that any newly purchased equipment be IPv6 compliant as well.

Another challenge is the ongoing renovation of the HCHB. This renovation is having a significant impact on Information Technology operations in the building and throughout Commerce since ten of the Department of Commerce operating units have a physical presence in the building – the Bureau of Industry and Security (BIS), the Economic Development Administration (EDA), the Economic Statistical Administration (ESA), the International Trade Administration (ITA), the Minority Business Development Agency (MBDA), the National Oceanographic and Atmospheric Administration (NOAA), the National Telecommunications and Information Administration (NTIA), the Office of the Inspector General (OIG), the Office of the Secretary (OSEC) and the Technology Administration (TA). For the majority of the Operating Units the building serves as their headquarters and their primary Information

Technology resources are housed in the building. As part of the renovation, swing space was built out in the north end of the Hoover Building for employees displaced by the renovation activity in the south end of the building. This swing space was cabled for both voice and data networks by the Office of the CIO and will be used by successive waves of Commerce staff as the renovation of the building proceeds through the decade.

The Hoover Building renovation will serve as an opportunity to save on ever-increasing utility costs by consolidating all HCHB server rooms into one facility. Server room consolidation will free up resources currently spent on duplicative security, environmental, and staffing efforts.

The HCHBNet project supports Commerce's Management Integration Goal.

MAJOR MODERNIZATION EFFORTS HIGHLIGHTED

Census Bureau

21st Century Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Enhancements

The 21st Century MAF/TIGER Enhancement Program (MTEP) will be a major improvement to the quality and accuracy of the Census Bureau's digital geographic data, which is used by census takers and other state, local, and tribal government entities and numerous academic institutions throughout the U.S. The MAF/TIGER Enhancement program is an example of the DOC's strategic thrust to redesign its business processes through the application of leading-edge digital technologies. Planning for the 21st Century MAF/TIGER adheres to DOC's architecture and security guidelines, including those relating to accessibility (Section 508) and the E-Government Act. The plan is supported by a comprehensive cost-benefit analysis and well-documented project management cost, schedule, and performance measurement baselines.

The current Master Address File (MAF) is a list of all addresses and locations where people live or work, covering an estimated 115 million residences, as well as 60 million businesses and other structures in the U.S. The Topologically Integrated Geographic Encoding and Referencing (TIGER) portion of the project is a digital database that identifies the type, location, and name of streets, rivers, railroads, and other geographic features, and geospatially defines their relationships to each other, to the MAF addresses, and to numerous other entities. The Census Bureau's Geography Division maintains the database internally in the DOC. Improvements to MAF/TIGER will allow the Census Bureau's data collection operations to adopt an integrated collection and update methodology for address lists and geographic data required for the 2010 Census, the American Community Survey (ACS), and household surveys. Additionally, while working within the privacy and confidentiality structures of Title 13, U.S.C, the MAF/TIGER Enhancement program will allow for two-way sharing of high-quality address range and geographic data with state, local, and tribal governments, and will allow the Census Bureau to provide the highest possible quality in the geographic products and services to its many statistical-data customers.

A modern processing environment allows the Census Bureau to use Commercial Off-the-Shelf (COTS) products and Geographic Information Systems (GIS) tools to make significant performance improvements in existing processing systems.

Considerable progress has been made on the MTEP's five objectives that, when complete, will provide the Census Bureau with the modern technology and the geographic data required to

achieve its mission: The status of the objectives: 1) The MAF/TIGER Accuracy Improvement Project, an effort that improves the positional accuracy of existing TIGER street features to 7.6 meters or better and adds new streets to every United States County, and is scheduled to be completed in FY 2010, 2) Implementing a modern processing environment was completed in FY 2006, and included the migration to a centralized blade server environment, 3) Expand and encourage geographic partnership options is a program to maintain an up-to-date address list with current street information allowing program partners to review and update MAF/TIGER information electronically and is scheduled to be completed in FY 2010, 4) Implement the Community Address Updating System (CAUS) will develop an address listing and geolocation system to identify and list new addresses and map new streets in mainly rural areas that do not use city-style addresses for mail delivery or for locating housing units. This program is in progress. CAUS will be moving in FY 2013 to the Geographic Support Systems (or GSS - Unique Project Identifier #4009), and 5) Implement periodic evaluation activities and expand quality metrics includes evaluation activities to check that corrected information is accurate and complete, and identifying new areas requiring additional work. This is scheduled to be completed in FY 2010.

The MAF/TIGER Enhancement program supports the Department's Innovation and Environmental Stewardship strategic goals (Goal #2 and #3).

National Oceanic and Atmospheric Administration

National Weather Service Telecommunications Gateway (NWSTG)

The National Weather Service Telecommunications Gateway (NWSTG) is the primary data communications switching system of the NWS. It is a global distributor of weather messages in support of the NWS commitment to the World Meteorological Organization's (WMO) worldwide data exchange structure and is a Regional Telecommunications Hub (RTH) of the WMO Global Telecommunication System communication network.

NWSTG provides national and global near real-time data exchange services and is operated twenty four hours a day to acquire data; process observations; construct and disseminate messages and files of observations, model analysis, and forecast products. Dependability and maintainability of the Gateway are crucial to maintaining a timely and reliable transmission of products of the highest importance to stakeholders worldwide. The NWSTG allows the NWS and its partners – public, private, and commercial – to perform their core functions. The NWSTG supports the NWS mission by collecting and distributing raw and processed hydro-meteorological data and products.

NOAA is planning to modernize the hardware, software, and telecommunications infrastructure, and provide a critical infrastructure protection backup for the NOAA central switching system that provides continuous acquisition and dissemination of domestic and foreign meteorological and hydrological data and products between providers and users.

The National Weather Service Telecommunications Gateway supports the Department's Innovation and Environmental Stewardship strategic goals (Goals #2 and #3).

Joint Polar Satellite System (JPSS) Ground System [formerly National Polar-orbiting Operational Environmental Satellite System (NPOESS)]

The restructured Joint Polar Satellite System will continue to address NOAA's requirements to provide global environmental data used in numerical weather prediction models for forecasts, as

well as provide space weather observations, search and rescue detection capabilities, and direct read-out and data collection products and services to customers. Data and imagery obtained from the Joint Polar Satellite System will increase timeliness and accuracy of public warnings and forecasts of climate and weather events, thus reducing the potential loss of human life and property and advancing the national economy. The restructured program will better ensure continuity of crucial climate observations and weather data in the future. Data from instruments on JPSS will be used to continue long-term, in some cases almost 50 years, of satellite-based climate data records. These data records are unified and coherent long-term environmental observations and products that are critical to climate modelers and decision makers concerned with advancing climate change understanding, prediction, mitigation and adaptation strategies, policies, and science. JPSS, with its global view, will play a vital role in continuing these climate data records.

The JPSS application supports the Department's Innovation and Environmental Stewardship strategic goals (Goals #2 and #3).

The Geostationary Operational Environmental Satellite-R Series (GOES-R) program

GOES-R is a key element of the National Oceanic and Atmospheric Administration's (NOAA) future operations. As such, the GOES-R series of satellites will be comprised of improved spacecraft and instrument technologies, which will result in more timely and accurate weather forecasts, and improve support for the detection and observation of meteorological phenomena that directly affect public safety, protection of property, and ultimately, economic health and development. The GOES-R series of spacecraft, set to begin launching in 2015, is expected to double the clarity of today's satellite imagery and provide at least 20 times more atmospheric observations from space. Forecasters from NOAA's National Weather Service for example, will see detailed images of potentially deadly hurricanes every 30 seconds, instead of every 7.5 minutes, which the current system provides. The GOES-R program involves a Space segment and a Ground Segment (IT). The GOES-R Ground System will capture, process and distribute information to users around the world. The ground system is composed of computers which control the satellite and process the satellite's data into products scientists and forecasters can use. The following functions will comprise the core Ground Segment functional architecture.

Mission Management (MM) includes mission scheduling, satellite (including instrument) operations, satellite state-of-health trending, orbital analysis, and ground operations.

Enterprise Management (EM) supports all operational functions by monitoring, assessing, and controlling the configuration of the operational systems, networks, and communications for the GOES-R ground segment. EM serves as the "glue" that links the MM, PG, and PD elements.

Product Generation (PG) includes algorithm support, processed raw data, generation of data for rebroadcast, and higher level data creation including operational derived products.

Product Distribution (PD) includes distribution of derived products to user portals.

This investment addresses the Ground Segment portion of the overall two satellite Geostationary Operational Environmental Satellite - Series R system (GOES-R/S). The IT elements consist of the antennas, hardware, software, and commercial-off-the-shelf (COTS)/non developmental item (NDI) components used to provide the mission management functionality (mission scheduling, satellite/instrument operations), product generation functionality (processing raw data to navigated and calibrated products, generation of data for rebroadcast and for higher level product

creation), product distribution functionality (distribution of navigated and calibrated products, GOES Rebroadcast data, and derived products to user portals), enterprise management (health and configuration status for the entire GOES-R system), and transition to operations. The GOES Series R, which will replace the GOES N-series, is required to sustain GOES capabilities through 2028; i.e., to close the GOES mission performance gap. Replacement of the current GOES Ground Segment is required to support the large increase in spatial, spectral, and temporal resolution of the new GOES-R satellite-based instruments, resulting in a significant increase in raw data downlink rate, in processing requirements for product generation, and in throughput for distribution of the products to users. The Ground Segment will operate from three sites: the NOAA Satellite Operations Facility (NSOF) in Suitland, MD will house the primary Mission Management (MM), Product Generation (PG), Product Distribution (PD), and Enterprise Management (EM) functions; the Wallops Command and Data Acquisition Station (WCDAS) will provide space communications services and selected Ground Segment functions; a geographically separate backup facility will be located in Fairmont, WV. The backup will have visibility to all operational and on-orbit spare satellites, and it will be concurrently and remotely operated from the NSOF. EM will be used to monitor and control all Ground Segment components at all locations.

The GOES-R program supports the Department's Innovation strategic goal (Goal #2).

Comprehensive Large Array Data Stewardship System (CLASS)

NOAA is responsible for archival storage and management of environmental data and information. NOAA has hundreds of millions of environmental observations stored on a variety of media dating back as far as the mid-1800s. These data support the nation's ability to ensure human safety and welfare, sustain economic stability and growth, and maintain environmental integrity. Much of these data and information are recorded on paper, film, and digital media.

Access to the environmental records is limited, and as the storage media deteriorates with age, the records are in danger of being lost. These data are of great value to researchers in government, academia, and private industry, as well as to the general public.

CLASS is a data archiving and access system that will improve the quality and stewardship of NOAA's data with the ability to manage volumes increasing to 18 petabytes by 2011. CLASS provides a means to preserve valuable meteorological, climatological, geophysical, and oceanographic records and to make this data accessible to, and usable by, a wide variety of researchers in both the public and private sectors.

CLASS conducts many environmental data rescue activities to preserve historical data before they are lost or become unrecoverable, thereby preserving these data to assist in finding solutions to today's problems. Many archived data sets that were in danger of being lost due to aging storage media have been rescued through migration to modern digital media.

CLASS supports the effort to understand climate variability and change to enhance society's ability to plan and respond through the application of modern, proven techniques and technology. By engineering a transition to an enterprise-capable data storage solution, CLASS will afford efficient management of high volumes (petabytes) of data critical to the United States Global Change Research Program and the scientific community. Management of these data requires a rapid expansion in storage capacity at the Data Centers and automation of data ingest, archive, quality control, and access. Significant increases in data volumes over the next 15 years

and corresponding growth in the number and sophistication of system users necessitate this shift from the traditional archive paradigm to a fully operational and integrated system managed at the enterprise level. Large portions of the Nation's current archive of environmental data is stored and maintained by the NOAA National Data Centers. These data exist in disparate systems, with non-standard archive and access capabilities. CLASS will provide a standard, integrated solution to data archive and access, resulting in numerous benefits: an easy-to-use access Portal for the Nation to obtain environmental data; integration of data for the user (Search, Browse, Geospatial capabilities); higher quality and volume of environmental data which contributes to improvements in prediction capabilities; and decreased cost of redundant resources. The CLASS program has identified technologies and best practices to efficiently archive the NOAA satellite and observational data; to safely and permanently preserve those valuable data for future generations to use; and to provide rapid data access in a cost-effective manner. CLASS archiving priorities will be set by the NOAA Observing Systems Council upon the National Research Council report of August 2007. A new competitive CLASS contract was awarded June 30, 2008. An Initial Baseline Review was completed in April 2009. CLASS will close the CLCOA Data Stewardship capability gap of the "inability to integrate data from various observing systems and provide climate-related data...to the user." By closing this gap the Nation will be better prepared to mitigate the effects of climate and weather extremes.

CLASS supports the Department's Innovation and Environmental Stewardship strategic goals (Goals #2 and #3).

Grants Online

NOAA developed the Grants Online system as part of a reengineering effort to enhance its business processes associated with soliciting and receiving grant applications through the government-wide grants.gov initiative. NOAA has successfully reduced the number of labor hours required to receive and process grants from over 17 hours per grant to approximately 2 ¼ hours per grant. The total time required to process and award a grant has been reduced by over one month.

Grants Online has enabled NOAA to redirect over 2,000 labor days annually to the technical review of grant applications. NOAA was the first federal agency to receive applications through the grants.gov e-government application front end, and the initial deployment of Grants Online was selected as an Excellence.gov "Top-25" Finalist.

NOAA's Grants Online is being leveraged among Commerce's grant-making operating units. It is now being used by the International Trade Administration (ITA), Minority Business Development Agency (MBDA), the Office of the Secretary, and is in use by the National Telecommunications and Information Administration (NTIA) to process several grants associated with the American Reinvestment and Recovery Act (ARRA).

The NOAA Grants Online System provides grants management automation in support of grant application evaluation, award, and long-term management and operations processes. Specifically Grants Online provides a standardized set of automated processes for viewing, retrieving, modifying, and deleting Application and Grant related information including, but not limited to: grant applications, awards, amendments, audits, proposal scoring and commentary, budget and finance data, as well as Technical and Panel Peer Review information. The Grants Online Project Team works in conjunction with, and in support of, the President's E-Grants Initiative and ensures that grant application information keyed into the Grants.gov system is

imported into the Grants Online system for use by all relevant NOAA components. A key component of the Federal E-Grants initiative recognizes that each Agency has requirements specific to its own grant making processes. At the time Grants Online was developed, each Agency participating in the E-Grants initiative was tasked with the development of its own back-end system that should be capable of importing grants data (e.g., applications and status reports) entered in the E-Grants Front-end. Grants Online automates key business rules and processes specific to NOAA's Grant Making Community as well as specific business elements outlined in the Department of Commerce (DOC), Interim Grants processing manual. The system platform was developed to be scalable to accommodate future change and enhancements in response to changes in grants management processes and policy.

Grants Online supports the Department's Management Integration Goal.

United States Patent and Trademark Office

Patent Systems Modernization

The United States Patent and Trademark Office (USPTO) recently initiated the development of the Patent End-to-End (PE2E) system to modernize the systems used by its Office of Patents to enable the USPTO to migrate to a more efficient operating environment that supports Commerce Strategic Goal #2: "Foster science and technological leadership by protecting intellectual property, enhancing technical standards, and advancing measurement science."

In turn, the PE2E system will directly support USPTO Strategic Goal #1: "Optimize Patent Quality and Timeliness," Strategic Objective #6: "Develop and Implement the Patent Next Generation Systems," USPTO Management Goal: "Achieve Organizational Excellence," and Management Objective #1: "Achieve management excellence" by focusing on strategic priorities, objectives, initiatives and actions."

The PE2E system will enable patent business customers to create, and USPTO internal users to process, electronic patent applications and follow-on papers more easily and accurately; reduces time required for processing and responding to customers; automates routine patent formalities tasks so that patent examiners can focus on the intellectual aspects of examination; and continuously improves quality throughout the processes. By implementing PE2E, the USPTO will reduce contractor costs, eliminate lost paper files, improve workflow tracking, and automate many support functions to yield a higher quality product.

Trademark Systems Modernization

The United States Patent and Trademark Office (USPTO) recently initiated the development of the Trademark Next Generation (TMNG) system to modernize the systems used by its Office of Trademarks, also to enable the USPTO to migrate to a more efficient operating environment that supports Commerce's strategic goal #2: "Foster science and technological leadership by protecting intellectual property, enhancing technical standards, and advancing measurement science."

In turn, the TMNG system will directly support: USPTO's strategic goal #2: "Optimize trademark quality and timeliness," strategic objective #5: "Modernize IT systems by developing and implementing the trademark next generation IT systems," USPTO's management goal: "Achieve organizational excellence," and management objective #1: "Achieve management excellence by focusing on the strategic priorities, objectives, initiatives and actions."

This new generation of Trademarks systems will address business needs with a re-architected, virtualized and service-oriented solution to address trademark business needs with a re-architected, virtualized and service-oriented solution.

OTHER OPERATING UNIT SPECIFIC INITIATIVES

Census Bureau

2010 Decennial Census Program

In response to the lessons of Census 2000, and in striving to better meet this nation's ever-expanding needs for social, demographic, and geographic information, the Department of Commerce and the Census Bureau developed a multi-year effort to completely modernize and re-engineer the 2010 Decennial Census Program. This re-engineering effort has four major goals:

1. Improve the relevance and timeliness of census long-form data,
2. Reduce operational risk,
3. Improve the accuracy of census coverage, and
4. Contain costs.

The re-engineered 2010 Decennial Census Program consists of three highly integrated components designed to take advantage of opportunities for innovations made possible through the expanded use of technology, major changes in the business process for data collection, and the use of focused coverage improvement procedures. These components complement each other and form the basis for re-engineering the 2010 Decennial Census Program; one will not work to its full potential without the others. The American Community Survey (at full implementation since 2005) is collecting and tabulating detailed characteristics data every year using a large household survey, meeting goal 1. In previous Decennial Census programs, these data were collected and tabulated only once a decade. The MAF/TIGER Enhancement Program was completed on schedule. This was a multi-year effort to improve the locational accuracy of the Census Bureau's geographic information systems in support of the American Community Survey and 2010 Census operations. For the 2010 Census, successful major tests were completed in 2003, 2004, 2005, 2006, and 2007, as well as the 2008 Census Dress Rehearsal. The 2010 Census itself is underway with the completion of the Local Updates of Census Addresses (LUCA) program and the Address Canvassing operation, with Census Coverage Measurement Independent Listing and Group Quarters Validation activities next. The Census Bureau also met its first two legal deadlines by delivering proposed topics for the 2010 Decennial Census Program to the Congress by April 1, 2007 and actual question wording for each topic by April 1, 2008 and is well on the way to collecting the basic characteristics data needed for congressional apportionment and redistricting. This integrated multiyear testing program was intended to help meet goal 2.

Because the Decennial Census is of such importance in achieving DOC's strategic goal #1, the Department considers it to be a special management concern and monitors the project closely.

Field Data Collection Automation (FDCA)

The FDCA program originally was designed to supply the information technology infrastructure, support services, hardware, and software to support a network of over 450 local offices and handheld computers (HHCs) that were to be used around the country for many operations. It is helpful to think of FDCA as comprising four fundamental components:

- Automated data collection using handheld devices to verify addresses, called Address Canvassing or AdCan;
- Automated data collection from respondents who failed to return the mail questionnaire, referred to as non-response follow-up, or NRFU;
- The Operations Control System (OCS) that tracks and manages Decennial Census workflow; and
- Census Operations Infrastructure, which provides office automation and support for Regional Census Centers and Local Census Offices.

In late November 2007, as a result of concerns regarding the ability to meet deadlines and budgets, the Deputy Director of the Census Bureau initiated a comprehensive assessment to determine the status of the program and better understand any issues or concerns for FDCA as the program approached key 2010 Census milestones.

After receiving input from expert panel members, the Secretary decided the Census Bureau should revert to a paper-based NRFU operation, as used in previous decennial censuses. The Census Bureau will implement NRFU and has taken responsibility for the Regional Census Center infrastructure and the Paper Based OCS. Harris Corp. kept the responsibility for and completed development of the Address Canvassing operation utilizing the handheld computers, the development and implementation of the OCS for Address Canvassing and Group Quarters Validation, and the installation and maintenance of the LCO infrastructure including communications. This option increases control of 2010 Census systems development. The Census Bureau knows how to develop and implement a paper-based NRFU, and the decision to do so again offers flexibility and minimizes the risks identified in the FDCA program. At the same time, the plan allows for leverage of Global Positioning System technologies by using handheld computers in the Address Canvassing operation. This will improve the accuracy of the central address list, which is fundamental to an accurate census.

Decennial Response Integration System (DRIS)

The overarching goal of the DRIS is to provide the solution required for self-response data capture, respondent assistance, and data integration in connection with the 2010 Census. Specifically, DRIS includes those activities related to developing, deploying, staffing, operating, securing, maintaining, and eventually disposing of the systems, infrastructure, and facilities required for self-response data capture, telephone coverage follow-up, and respondent assistance for the 2010 Decennial Census process. DRIS will provide a direct service to the public. It will enable individuals to obtain assistance with 2010 Census questions, request an English-or foreign-language census form or a language guide, and respond to the 2008 Dress Rehearsal and the 2010 Census via paper. DRIS will also provide for self-response via telephone. Finally, DRIS will capture 2008 production metadata related to all operational modes. This will allow the Census Bureau to determine the productivity and progress of each self-response mode independently and adjust operating plans based on test results.

Data Access and Dissemination System (DADS)

The Census Bureau's Data Access and Dissemination System (DADS) is composed of the internal and external American FactFinder (AFF) systems, and the Data Product Production (DPP) systems. DADS has created, produced, and disseminated Census 2000 and other Census Bureau data and products continuously since its inception in 1997. Currently, AFF is the Census Bureau's primary disseminator of predefined and customized tables for Census 2000 data, the American Community Survey, and various Economic Censuses and Surveys. The DPP system tabulates data from Census 2000 and creates products such as the Public Law 94-171 Redistricting Files.

In September 2007, the Census Bureau awarded a fully competed follow-on contract, named DADS II, to the IBM Corporation. Under the DADS II contract, IBM is tasked, as a full partner with the government, with continued support of existing legacy systems (AFF and DPP) while concurrently developing the next generation of DADS. As such, the DADS program will exist in a mixed steady state (legacy systems) and development and implementation (replacement systems) environment until DADS legacy systems are retired. To ensure census data products are made available and to support the 2010 Decennial Census, the Decennial Dress Rehearsal, and the American Community Survey, the Census Bureau will continue to operate and maintain legacy systems until the replacement systems are fully mission-capable and the legacy systems are retired.

The goal of the DADS program, through the new DADS II contract, is to replace the legacy capability with an integrated system that will allow greater extensibility, efficiency, flexibility, and functionality in the tabulation and dissemination of the Census Bureau data. The DADS II contract began in September 2007 with a one-year base period and eight one-year option periods, ending in June 2016.

The DADS application supports Commerce's mission goal #1.

National Oceanic and Atmospheric Administration

All-Hazards Emergency Messages on NOAA Weather Radio (NWR)

NWR broadcasts National Weather Service (NWS) warnings, watches, forecasts and other non-weather related hazard information 24 hours a day directly to the public. During an emergency, NWS forecasters interrupt routine broadcasts and send a special tone, activating local weather radios. Weather radios equipped with a special alarm tone feature sound an alert to give citizens immediate information about a life-threatening situation.

NWR broadcasts warnings and post-event information for all types of hazards: weather (e.g., tornadoes, floods), natural (e.g., earthquakes, forest fires, and volcanic activity), technological (e.g., chemical releases, oil spills, nuclear power plant emergencies, etc.), and national emergencies (e.g., terrorist attacks). Working with other federal agencies and the Federal Communications Commission's (FCC) Emergency Alert System (EAS), NWR is an all-hazards radio network, making it the most comprehensive weather and emergency information available to the public.

For non-weather emergencies, NWS activates the system at the request of local and/or state officials. NWS does not initiate the contact or the message. Local or state officials provide text information about the non-weather hazard directly to local NWS offices. In most areas, the local

or state Office of Emergency Management or Preparedness, civil defense, police or mayor/commissioner sets up linkages to send messages on systems such as the EAS and NWR.

NOAA is engaged in modernizing NWR through the Weather Radio Improvement Project (WRIP). A critical component within the NOAA Weather Radio (NWR) System, the Console Replacement System (CRS), has reached its end of life. Consequently, NOAA's ability to sustain the operation of NWR, a vital dissemination system that provides watches and warnings to the public, is in jeopardy. WRIP will:

- Replace the obsolete NOAA Weather Radio (NWR) Console Replacement System (CRS);
- Provide Department of Homeland Security (DHS)/Federal Emergency Management Administration (FEMA) access to NWR network for dissemination of voice alerts;
- Consolidate existing NWR and NOAA Weather Wire Service (NWWS) networks into a single telecommunication infrastructure; and
- Implement a flexible, scalable, centralized infrastructure that can enable additional dissemination services to commercial users (wireless service providers, PDAs, cell phones, mobile systems, etc.).

NWR supports the Department's Science and Environmental Stewardship goals (Goals #2 and #3).

Advanced Weather Interactive Processing System (AWIPS)

AWIPS is a technologically advanced information processing, display, and telecommunications system that is the cornerstone of the National Weather Service (NWS) modernization effort. AWIPS is a Linux-based interactive computer system that integrates all NWS meteorological and hydrological data with satellite and radar data and enables forecasters to prepare and issue more accurate and timely forecasts and warnings.

AWIPS is a nationwide interactive computer and communications system that integrates all meteorological, hydrologic, satellite, and weather radar data to enable the forecaster to prepare and issue more accurate and timely forecasts and warnings.

The AWIPS technical environment consists of an integrated suite of automated data processing equipment deployed to field offices and National Centers to support complex analysis, interactive processing, display of hydro-meteorological data, and the rapid dissemination of warnings and forecasts in a highly reliable manner. A Wide-Area-Network connects sites for multi point-to-point and point-to-point communications. NOAA is designing and constructing the next generation of the system.

AWIPS II will bring advanced functionality to forecasters in the field, while simultaneously simplifying code and consequently strengthening system performance while reducing the cost and complexity of maintenance. This will be achieved while retaining a system look and feel that will make the AWIPS evolution transparent to the forecaster. AWIPS II will be built on a Services Oriented Architecture. The AWIPS II structure will also take advantage of open source software, which has become a viable alternative to the costly COTS software available when the first AWIPS was initially constructed in the mid-1990s.

AWIPS II will develop a modern technology platform and a continuous technology refresh cycle for NOAA's distributed data processing system used at NWS field offices, regional offices, and headquarters that integrates all meteorological, hydrologic, satellite, and weather radar data received from all other observational and analytical elements that enables the forecaster to prepare and issue more accurate and timely forecasts and warnings.

AWIPS supports the Department's Innovation and Environmental Stewardship goals (Goals #2 and #3).

Next Generation Weather Radar Product Improvement (NEXRAD PI)

The National Weather Service provides the nation with meteorological and hydrological services that are as complete, accurate, and timely as possible within existing scientific, technological, operational, and economic constraints. These services include data collection, data analysis, forecasting, and information dissemination. One of the most important elements of this overall mission is the NWS responsibility for public warnings and forecasts. The goal of this service is to provide the public with timely and accurate meteorological, hydrological, and oceanographic information for public safety and planning purposes and to ensure economic vitality.

The NEXRAD system is one of NWS' prime observation systems for acquiring data and providing weather warning and forecast information about tornadoes, severe thunderstorms, and flash floods. The NEXRAD Product Improvement (PI) program is part of a tri-agency initiative to plan and implement continued improvement of the NEXRAD system. It involves NWS, the Department of Defense's Air Force Weather Agency, and the Department of Transportation's Federal Aviation Administration (FAA). The program goals are to: (1) improve NWS tornado, large hail and flash flood warnings; (2) provide for cost effective long-term maintenance of WSR-88D weather radar units, (3) provide cost effective recurring technological improvements in order to postpone replacing the WSR-88Ds, and (4) increase the update rate of radar data acquisition and acquire higher resolution data. NEXRAD PI completed the Open System Architecture project that replaced the obsolete, 12-year-old computer and signal processing equipment in the WSR-88Ds with Commercial-Off-The-Shelf hardware and standards-based open system compliant software. The NEXRAD PI Dual Polarization project will use new algorithms that: mitigate the range/velocity ambiguity problems; remove non-weather clutter from data; and can distinguish among rain, snow, and hail.

Full deployment of the NEXRAD PI will provide significant improvements to the NWS' capability for producing tornado and severe weather warnings with greater accuracy, fewer false alarms, and with 50% greater lead times.

NEXRAD PI will acquire modern hardware advancements in radar meteorology and information technology to improve the performance of the nation's Doppler weather radar network. NEXRAD acquires observation information about tornadoes and severe thunderstorms. The Dual Polarization modification will improve the ability to estimate precipitation amounts, detect size and location of hail and snow, and discriminate between weather and non-weather phenomena.

AWIPS supports the Department's Innovation and Environmental Stewardship goals (Goals #2 and #3).

National Institute of Standards and Technology (NIST)

Time Scale and Time Dissemination

The Time Scale and Time Dissemination System provides the Nation's official standards for time and frequency to meet critical industrial needs, including time stamping of electronic financial transactions, telecommunications, electric power transmission, transportation, navigation and positioning (including support of the Global Positioning System), and various defense applications. Time dissemination methods are developed using Internet and radio broadcasting for industrial, consumer, government, and scientific applications, which serve millions of customers daily.

This application supports Commerce's strategic goal #2

International Trade Administration (ITA)

International Trade Process Streamlining (ITPS)

ITPS is a comprehensive multi-agency initiative whose goal is to increase the number of small U.S. business exporters and the dollar value of export transactions. ITPS seeks to accomplish this goal by improving access to government export programs and reducing the barriers that small and medium-sized enterprises (SMEs) encounter when seeking help to export their products or services. Commerce, as chair of the Trade Promotion Coordinating Committee (TPCC), coordinates this effort with input from key partners including the U.S. Department of Agriculture, the Export-Import Bank of the United States, and the Small Business Administration. Other TPCC agencies, including Trade Development Agency, the State Department, and the Overseas Private Investment Corporation, are also important players.

Regarding the potential impact for ITPS, U.S. companies with fewer than 20 employees accounted for nearly \$32 billion in export sales over the last decade and need our assistance. Despite this encouraging statistic, only 2 percent of small and medium-sized enterprises (SMEs) export, and of those that do, 63 percent export to only one foreign market. These non- or under-exporting SMEs represent an immense, untapped source of future U.S. employment and prosperity.

Numerous surveys have revealed that a critical barrier for small exporters is a lack of information about the export process and limited resources for obtaining the information and documents necessary to conduct business abroad. Although the federal government provides a wealth of market research, programs, and counseling to assist SMEs in all aspects of the export process, this assistance is spread across 19 separate agencies and dozens of Web sites.

The ITPS initiative was created to make it easier for SMEs to obtain the information and documents needed to conduct business abroad. Export.gov, the government's online portal for small business export assistance information has been enhanced to fill this gap.

Specifically, the initiative has:

- Consolidated and integrated the export process online under Export.gov, which includes foreign partner matching/verification, export financing and insurance, and consolidated market research;

- Developed online applications for export financing, insurance, and loan guarantees offered through the Export-Import Bank and the Foreign Agriculture Service's Credit Guarantee System; and
- Introduced "One-Stop, One Form," which has reduced the time required for SMEs to fill out export-related forms and paperwork by providing a single online form for many export transactions

ITPS has created a seamless environment for SMEs to research markets, gather trade leads, and conduct a majority of their export transactions online. Moreover, it now provides more timely and accurate export information and results in cost savings for U.S. businesses by reducing the amount of time they spend trying to get information and filling out applications and forms.

As a result of building and marketing Export.gov, over 50,000 companies are now registered with Export.gov. Our domestic network of trade specialists are contacting these companies from across the country and helping them enter the export business. Export.gov continues to receive a customer satisfaction rating of over 80 percent and quarterly visits to the Web site typically number over half a million.

National Telecommunications and Information Administration (NTIA)

Spectrum Management

NTIA is currently using enterprise architecture to leverage its Paperless Spectrum Management Initiative recommendations to redesign the systems that support this critical business function. In developing its Segment Target Architecture, NTIA has identified areas where interoperability of systems, particularly with the Federal Communications Commission and Department of Defense, is critical to the success of the effort. NTIA is also implementing a Services Oriented Architecture to facilitate cross-agency integration.

NTIA's Spectrum Management project provides the information technology support required for NTIA to manage the federal government's use of the Radio Frequency spectrum. NTIA processes between 6,000 and 10,000 frequency assignment actions monthly. To preclude harmful interference between stations, these actions (applications from federal agencies for new frequency assignments or revisions of existing assignments) must be coordinated with other federal agencies, and in many cases with the Federal Communications Commission and the Government of Canada. NTIA processes frequency assignment actions using its Frequency Management and Records System (FMRS) software and networked systems.

The spectrum management system supports increased technology development and commercialization by improving use of the radio spectrum through increased sharing and spectrum efficiency. It provides a more rapid method for federal agencies to obtain the spectrum necessary to operate their radio communications. It also provides a method for radio-communication system manufacturers to ensure that their systems meet federal standards and provides federal agencies with a means to obtain technical information on radio communications for planning future spectrum use.

NTIA's Spectrum Management applications support Commerce's strategic goal #2.

United States Patent and Trademark Office

Data.gov Web Site

In keeping with the Administration's commitments for transparency, participation, and collaboration, the USPTO provided the 2009 patent application and grant datasets to the Data.gov Web site. The purpose of Data.gov is to increase awareness and access to machine readable information produced by the U.S. Federal Executive Branch of the government. Through Data.gov the public can easily find, download, and use these datasets. Future datasets will be added providing the public with no-cost access to bulk text and image data collections of current and retrospective patent and trademark data. Data.gov efforts supports Commerce's Strategic Goal #2 and USPTO's Management Objective # 2: "Establish Cost-Effective, Transparent Operations and Processes."

Bureau of Economic Analysis (BEA)

Economic Accounts

BEA promotes a better understanding of the U.S. economy by providing the most timely, relevant, and accurate economic data in an objective and cost-effective manner. BEA's economic programs require the information technology support provided by the Office of the Chief Information Officer. BEA recognizes the ongoing need to couple new opportunities presented by technological advancements with the requirement to measure and disseminate data about a rapidly changing economy. To meet this objective, BEA has developed and initiated a 5-year plan for statistical production modernization. The goals of the modernization effort are: (1) significantly increase the efficiency of the Bureau's computational processing cycle thus widening the critical window available for analysis; (2) provide a stable platform on which cutting-edge analytical tools can be developed; (3) provide flexibility required to adapt methodologies in response to a rapidly changing economy; (3) enable rapid dissemination of data to policy makers; (4) leverage efficiencies by consolidating systems and utilizing common technical approaches; and (5) lessen the processing burden on the Bureau's economists

The economic accounts prepared by BEA support Commerce's strategic goal # 1.

Bureau of Industry and Security (BIS)

Export Control Automated Support System (ECASS)

BIS promotes U.S. national and economic security and foreign policy interests by managing and enforcing the Department's security-related trade and competitiveness programs. BIS' core export administration and export enforcement business processes have been directly supported by a legacy computer system, ECASS, since it was originally deployed in 1984.

The ECASS program is being modernized to incorporate newer technology and to provide a more robust operational capability. Modernization of the ECASS Program consists of the major ECASS (2000+) Redesign project.

The number one priority of the program is retaining the current IT capability to support the BIS mission. The ECASS (2000+) Redesign project is replacing the fragile ECASS Legacy system supporting 450 BIS staff and 32,000 exporters with a maintainable, reliable, current technology system. ECASS Redesign addresses the need to mitigate risk of losing current capabilities, actively capture 25 years of legacy system knowledge, and migrate the "as-is" critical business process support to a systems foundation that is supportable and expandable. The ECASS

Redesign project consists of redesigning the ECASS Legacy system using a current service-oriented architecture technology platform and migrating existing ECASS functionality and data from ECASS Legacy to the new ECASS Core System.

When complete, the ECASS Redesign project will ensure that BIS is able to continue to support its mission critical functions, specifically processing more than 28,000 requests for export licenses, re-export licenses, and commodity classifications per year. ECASS Redesign will include export enforcement and anti-boycott information reports and assessments, and provide export data to external federal agencies. In addition, the project will enable BIS to improve security and data integrity, and productivity, by virtue of a soundly designed system which uses current standards-based software and hardware technology platforms and application architecture.

Also, BIS proposes to address the need to apply enabling technology that has emerged over the past decade to re-engineer BIS business processes. This initiative in FY 2010 has the potential to close a long-standing IT service gap and will provide added functionality such as tools to improve participation in overseas contingency operations and counter-proliferation efforts. The re-engineered business processes and requirements will be the basis for the development and implementation of computer systems to support improvements in subsequent program years with flexibility to incrementally focus on highest priority export control requirements each year.

ECASS and ECASS Redesign support Commerce's strategic goal #1.