

**National Oceanic and Atmospheric Administration  
Office of the Chief Information Officer]  
NOAA/OCIO Financial Management IT Operations  
006-48-01-01-01-3801-00  
Operational Analysis  
January 2006 – December 2006**

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**Executive Summary**

NOAA/OCIO Financial Management IT Operations provides NOAA corporate IT support through hosting financial systems and applications, providing security for these systems, network connectivity and access, database management, and support for the annual Financial Audit. This support is provided by two divisions of the OCIO Information Systems Management Office from the NOAA Information Technology Center (ITC). The divisions are the Administrative Systems Division (ASD) and the Financial and Administrative Computing Division (FACD).

The Financial and Administrative Computing Division (FACD) operates the NOAA Information Technology Center (ITC), including support for NOAA's current accounting system and other major administrative systems and for the development, operation, and training of new accounting and administrative systems, such as Commerce Business Systems (CBS). The Division serves the NOAA financial and administrative program support community, users in the Commerce Bureau of Industry and Security (BIS), and financial and administrative users throughout NOAA. The Division provides computing services in accordance with established directives, operational policies, and user defined requirements. The Division operates computers and computer server and related networking equipment,

as well as associated mass storage, and the Division provides system software support for this equipment and related user training as needed for its users. FACD maintains operational schedules and support services so as to meet user requirements, including support in using the Division's data base management software capabilities. The Division supports the networking connections to the NOAA Corporate Offices, Program Support Units, the National Finance Center, the Treasury Department, and to its users throughout NOAA. The Division participates in planning for technological and performance upgrades of the Division's computer and networking hardware and software.

The Administrative Systems Division (ASD) provides Information Technology (IT) services and software applications oversight related to NOAA's administrative and financial systems in support of NOAA organizations, particularly NOAA's Program Support offices. The ASD provides IT services to include: IT Project Management, Contract Administration and Contracting Officers Technical Representative (COTR) responsibilities, IT Consulting, IT Requirements Analysis and Development, Systems Analysis, Software Applications and Database Design and Development, Database Administration (DBA) Services and Oversight, Software Applications Implementation and Administration, Continual Software Systems Support and Management, Software Systems Security, Web Site Design and Development, Continual Support and Oversight of Web Sites, and the Design and Development of Automated Training Courses. The ASD provides full life-cycle management and support of NOAA administrative and financial systems to deliver efficient, effective, and accessible software solutions and ensures those solutions comply with DOC, NOAA and ISMO procedures, policy, and IT architecture. The ASD supports large NOAA administrative and financial systems such the NOAA CBS for financial and accounting processes, Grants Online for the processing and management of NOAA's grants, data management and reporting on NOAA's employee database to support the management of NOAA's workforce, as well as many other support systems and web sites enabling NOAA to perform its mission. The ASD participates in DOC and NOAA studies and special projects related to existing and future administrative and financial systems, participates in administrative system planning, and supports the innovative application of advanced system concepts to NOAA systems.

This report focuses on the operational state of the program as of December 31, 2006 and is based on guidance developed by the Department of Commerce. The NOAA Information Technology Center program directly facilitates NOAA's Strategic Goal to **"Provide cost effective enterprise-wide computing, networking, and information systems services for administrative, financial, and management functions."** The current program meets established cost, schedule and performance parameters.

This operational analysis (OA) is an annual, in-depth review of the program's performance based on the following:

- Customer Results
- Strategic and Business Results
- Financial Performance
- Innovation

## 1.0 Customer Results

The Information Technology Center (ITC) has provided central computing services for NOAA financial and administrative activities since the mid 1970's. This document addresses the continuing systems support and services provided by the ITC to meet the financial and administrative management requirements of NOAA Management. The OCIO ITC Support Services Contract is a 5 year contract with a total estimated value of \$15.0 million. The requirements of this procurement are met through the DOC

COMMITTS Government-Wide Acquisition Contract (GWAC). The relatively short term (max five years) duration of the contract is proposed to allow CIO/NOAA the maximum flexibility to adjust to changes that may be required through E-Commerce and E-Government activities, government-wide enterprise architectures, and Department of Commerce dictates for financial and administrative systems.

The National Oceanic and Atmospheric Administration (NOAA) Chief Financial Officer (CFO) and Chief Administrative Officer (CAO), through the NOAA Chief Information Officer (CIO), supports NOAA-wide financial and administrative systems through the operation of an information technology data center. The Information Technology Center (ITC) provides services that are key to obtaining the objectives of the President's Management Agenda, achieving the goals of the Office of Management and Budget for effective and efficient government, and NOAA's goal for excellence in the technical operational support of NOAA's financial, management, and administrative systems. Activities of The Information Technology Center (ITC) include the following: direct, technical operational support of over 30 different national financial and administrative functional systems, including the Commerce Business System (CBS) which deployed as NOAA's official accounting system of record in October 2002; messaging and directory services, application services, network services, and computing services; management of the NOAA Finance and Administration Office Wide Area Network, firewalls (at multiple national sites), and associated networking equipment for NOAA financial and administrative operations including access to DOC/ Office of Computer Services, USDA/National Finance Center, the Treasury Department's Financial Management Service (FMS), and the NOAA DC Metro Area Network; computer operations; computer servers and related networking equipment, as well as associated mass storage; remote access capabilities; and, system software support for this equipment, as well as systems software development and support and related user training as needed.

## **1.1 Customer Requirements and Costs**

The ITC operates in a complex environment. This is the result of approximately 20-30 years worth of piecemeal, stove piped development across the financial and administrative functional areas, overlaid with different priorities and needs among the NOAA Line Offices. This environment is further complicated by financial and administrative system requirements of the Department of Commerce, the Office of Management and Budget, the Office of Personal Management, financial audit standards and other requirements that have been addressed through system enhancements over the years. Within NOAA and the Department of Commerce, many system improvements were delayed or cancelled pending the migration to CBS as the financial system of record. Now that CBS is the NOAA system of record, many of the requirements for interfaces with the accounting system need to be addressed.

At the same time, the technical sophistication of professional staff members has increased-they know that the tools should be available to help meet increasing demands and that these tools are absolutely necessary in an era of declining personnel resources. These factors have lead to increased demands for specific application systems and the technical operational support provided by the ITC for these systems. Today we face demands internally for increased computer support of all kinds as well as increasing pressure from functional administrative areas within the Department of Commerce to move to common systems, facilitating access and use of data. Some examples of the recent new or improved functions the ITC is either operating or preparing to operate include: the NOAA Table of Organization (specific application developed to meet NOAA requirements, may become a DOC endorsed system), NOAA Executive Correspondence System (WebCIMS, also used by DOC); NOAA International Agreements Database (requested and used by NOAA management); Voluntary Leave Bank (being piloted at NOAA, may be adopted DOC-wide); NOAA Budget Formulation System (Monument, currently in use at the Department of State; successful deployment at NOAA may lead to DOC implementation); Interagency Agreements Database (requested by NOAA management); and the Financial Analysis and Commitment

## Tracking Systems (FACTS).

The operational support of these systems at the ITC is a critical factor in the functionality and benefit of these systems to NOAA employees and consequently to the achievement of NOAA's mission. In addition, NOAA has completed the effort for an electronic grants system that interfaces with the Grants.gov application being developed for the front-end of all government grant programs-this system is described further below.

The entire environment for financial and administrative systems, government-wide, is involved in the initial steps of a total business process re-engineering effort. The drive to modernize these systems, streamline processes, allow requirements to be met through standard interfaces, is being led by the twenty-four E-Commerce projects championed by the Office of Management and Budget. The ITC is directly connected to this revolution in the provision of financial and administrative systems by its support of NOAA's Grants Online system. When the E-Grants front-end opens for potential grant applicant use, NOAA's Grants Online system will be ready to receive the electronic grant applications and allow the analysis and processing of the grant application within NOAA, from start to finish, electronically. This can only be achieved because of the consistency in development standards between the E-Grants effort and Grants Online, which is a direct result of the emphasis placed on defining technical reference models and enterprise architecture standards. Grants is the first area where a true commitment to government-wide process and system improvements is leading the way. Over time, this precedent will be duplicated in other financial and administrative areas. Even today, the Department is considering endorsing the NOAA Grants Online system as the preferred Department of Commerce system and, in anticipation, other DOC operating units are already involved in discussions with NOAA concerning partnering with NOAA (including hosting other DOC agency applications of Grants Online at the ITC).

This initiative is critical in the drive to ensure the functional systems hosted at the ITC and the services provided throughout NOAA (and DOC) are offered in the most cost-efficient environment. Below is a list of major systems managed and supported by the ITC: Interactive FIMA (IFIMA), NFA Table of Organization, (NFATO), NOAA Table of Organization (NOAATO), NOAA Payment System (NPS), Monument Budget System, WebCIMS Correspondence Control, Voluntary Leave Bank System (VLBP), International Affairs Database (IAD), Financial Analysis and Commitment Tracking System (FACTS), Telecommunications Operations (TELOPS), Controlled Correspondence System (CCS), NOAA Locator, E-Learning, FOIA, NOAA Grants System (NGS), Distribution System, HR Tracking, Cross Agency Agreements, CBS, Travel Manager, BankCard Discoverer.

In FY06, \$465K was invested in the acquisition of technology to improve the performance and security of CBS, and to modernize network infrastructure. Additionally, \$1.0 Million was requested for NOAA End-To-End System: continue to automate budget production and analysis of technology for implementing an end-to-end resource management system which would have the capability to support all phases of the Planning, Programming, Budgeting and Execution System (PPBES) process.

The NOAA Budget Formulation is the third phase within the Planning, Programming, Budgeting and Execution System (PPBES). As such, it is essential that corporate decisions made during the Planning and Programming phases be accurately captured and available for reuse during the Budgeting phase. Currently this may be done through predominately paper-based processes, with lots of duplicative entry, and an inability to adequately capture the management decision criteria from the Planning and Programming phase for future use. The existing NOAA technological capability in support of the formulation is limited and needs to be enhanced. The \$1 million will provide resources for upgrades to

enable NOAA to incrementally improve the support of the formulation and will allow an analysis of where technology can be applied in all phases of NOAA budget.

The longer term End-to-End Resource Management System must:

--Support an integrated PPBES process, enabling one common set of corporate data

--Provide end-to-end formulation, execution and presentation capability for financial management of NOAA's 41 programs as well as Traditional Budget Structure

--Produce NOAA's Budget, including all necessary exhibits

--Interface with CBS Core Financial System and Commerce Reporting System--Pass data between various systems supporting the PPBES resource management process

--Provide views of the data from the various processes reflecting current information from each process/cycle

--Provide the ability to conduct analyses with comparisons across the various cycles and processes--Have a user friendly interface

--Support Budget Development and Production

The NOAA Information Technology Review Board (NITRB) reviewed this initiative on August 17, 2004. The NOAA Finance and Administration CIO and the NOAA CIO have participated in reviewing the analysis performed to date and will continue to have active roles in the 2005 budget process reengineering analysis.

## 1.2 Performance Measures

<b>Fiscal Year</b>	<b>Strategic Goals (s) Supported</b>	<b>Existing Baseline</b>	<b>Planned Performance Improvement Goal</b>	<b>Actual Performance Improvement Results</b>	<b>Planned Performance Metric</b>	<b>Actual Performance Metric Results</b>
2004	Organizational excellence in facilities, infrastructure, security, human capital, and administrative services	Current Contract, time and materials	Award new ITC Support Services Contract	Contract Awarded	Firm fixed-price, performance-based contract awarded on schedule	Contract awarded in accordance with revised schedule
2004	Organizational excellence in facilities, infrastructure,, security,	Current Operating System	Upgrade to New Operating System	OS Installed on schedule	OS installed on schedule	OS installed on schedule

	human capital, and administrative services.					
2005	Organizational excellence in facilities, infrastructure, security, human capital, and administrative services.	Performance measures and service level agreements established	100% of performance measured used to manage contract	Performance measures developed	All performance measures updated at each regular contract management meeting.	Used to measure contract performance
2006	Organizational excellence in facilities, infrastructure, security, human capital, and administrative services.	Majority of ITC processors are over 5 years old	Increase processing capacity at ITC by 30%		Number of high end processors less than 4 years old.	Primary systems replaced – performance increase of 400%
2006	Improve overall efficiency of systems management	Multiple system consoles and system event logs	Consolidate system consoles and event logs		Reduction in system consoles and event logging platforms	System consoles consolidated and event and console logs captured
2007	Organizational excellence in facilities, infrastructure, security, human capital, and administrative services.	Year end “close-out” procedures and processing	Improve processing efficiency during year end “close out” by 30%		Customer satisfaction survey results	

## 2.0 Strategic and Business Results

The investment required to provide continuing data center operational support for financial and administrative systems is key to providing the basic operational foundation enabling the accomplishment of NOAA's mission and strategic goals and objectives. This investment is consistent with the requirements of the Government Paperwork Reduction Act to improve the productivity, efficiency, and effectiveness of Federal programs. It directly supports NOAA's cross-cutting priority for the 21st century for organizational excellence in facilities, infrastructure, security, human capital, and administrative

services. NOAA's facilities, infrastructure, security, human capital, and administrative services are largely dependent on systems and networks hosted and supported at the ITC to accomplish their missions. NOAA's priority to improve the performance and delivery of administrative services to NOAA is dependent upon the capabilities of the ITC. A large number of NOAA Program Review Team recommendations (endorsed by NOAA Leadership in May 2002) called on NFA to improve administrative operations and functions. Nearly all of these functions rely on ITC systems and infrastructure. This initiative is also consistent with NOAA's FY2002-FY2006 Strategic Information Technology Plan (Administrative Systems). The continuing investment in the ITC operations, supports aligning NOAA's Information Technology Investment Strategy with NOAA's strategic objectives in accordance with OMB Circular A-130 and the Clinger-Cohen Act of 1996. This investment will improve the efficiency and effectiveness of NOAA Information Technology resources by facilitating the migration of critical administrative systems to current, up-to-date hardware and software platforms, integrated and supported by dedicated staff possessing the best skill sets and expertise available.

## 2.1 NOAA ITC Helps to Achieve Strategic Goals

[Reference the [Commerce Department](#), NOAA, and Line Office goals and strategy found in current strategic and planning documents (such as the Strategic IT Plan, Enterprise Architecture, Operational IT Plan, Annual Operating Plan, and other documents). Describe how the investment supports the mission and strategy.]

- Implemented new Hewlett Packard ES80 Alpha to improve performance of the CBS Data Warehouse environment. Overall performance improvement approximately 5 times faster than previous platform.
- Implemented new HP ES80 to improve performance of the CBS Production environment. Overall performance improvement approximately 5 times faster than previous platform.
- Migrated CBS Training from legacy HP 4100 system to HP GS140 hardware that was previously used for CBS Data Warehouse production environment
- Replaced legacy Sun 3500 servers with Sun V490 servers to support Commerce Business System (CBS) Bank Card Applications (CPCS/CSPS) for both production and development environments
- Implemented three EVA5000 virtualized Storage Arrays for CBS Data Warehouse and Database Production increasing storage by 10 terabytes
- Acquired and implemented F5 Big IP network devices for system load balancing, high availability, support for FIPS 140-2 SSL, and centralized management of SSL Secured Certificates to reduce server overhead and management at the server level
- Replaced Legacy Information Technology Center Computer Room Air Conditioners with 30 ton and 26 ton units
- ITC IT Support services contract option year 2 extension awarded.
- Acquired and implemented new LTO II Robotic Tape Library. This was coupled with a dedicated Sun Server to create an enterprise-class backup system using the Legato Networker backup

utility. This resulted in increased ITC media storage capacity, reduction in physical media used, and reduction in overall backup time to 1/4 of previous.

- Implemented dedicated Windows servers for NOAA Budget office to support SAS application and NOVO application deployments
- Acquired and implemented Windows OS servers to support CBS TIBCO, CCR, and CCR-Web applications
- Acquired and Implemented various Sun servers for Oracle (CBS) Discoverer Test server and ASD support of NOAA enterprise database and applications which increased the number of Sun servers by 117% since FY05
- Acquired and implemented HP ES47 server and coupled with existing EVA 3000 Storage Array (previously used for production. This provided a separate staging and test environment for OS patches / upgrades which reduces the risk of deployment directly to CAMS Data Warehouse and Production servers
- Major upgrades to ITC network infrastructure including: upgrade of network switches to GigaByte; implement separate Fiber optic connectivity to Silver Spring Office and planned for future connection to CBS FSD – Gaithersburg. Additional upgrades to Network Routers and Firewalls to support AES encryption
- Major improvements in compliance with FISCAM Audit requirements. 13 Notification of Findings and Recommendations (NFRs) were issued in the FY05 Audit. FY06 Audit NFRs were reduced to 2 due to the efforts of the team of ITC Contractors and Federal staff through the implementation of processes, tools, and procedural improvement where 23 of the 24 recommendations in the FY05 NFRs were demonstrated to be resolved. Of the two FY06 NFRs, one was issued as Closed due to actions taken during fieldwork.
- All ITC desktop / Laptop systems upgraded to Windows XP and LAN migrated to Active Directory
- Acquired and implemented new Windows servers for CBS Citrix environment
- An extensive effort was made timely submission of a professional, best value NOAA proposal for the CBS Server Consolidation effort which included realistic Not-To-Exceed costs and addressed all requirements
- The ITC physical security system was upgraded to include the installation of closed circuit cameras and video recording devices; key card entry and exit readers tied to NOAA badges and NOAA security office systems, as well as, physical intrusion detectors and alarms. This dramatically improved monitoring and access control capabilities for the ITC facility

## **2.2 Business Results**

### **2.2.1 Program Management and Controls**

At the NOAA level, the NOAA's Program Planning and Integration (PPI) and Programming, Analysis and Evaluation (PA&E) offices provide management oversight from Planning to Programming to Budgeting to Execution (PPBES) using the PPBES process

### 2.2.2 Monitoring Cost, Schedule and Performance

Program funding increases to meet planned Program Initiatives are requested through the NOAA PPBES process. Each PPBES Program capability in the Program Operating Plans (POPs) provides cost, schedule, and performance information.

#### **Cost: POP Current Program Resources**

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Funding (\$K)	4355	4273	5788	3752	3715	3677	3672	3673
FTE	11	11	11	11	11	11	11	11
Contractors (Total #)	30	30	30	30	30	30	30	30

#### **Schedule: POP Program Schedule**

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Perform Annual D-R Test		Q2						
Start Annual IT Audit	Q2							
Complete Annual IT Audit	Q4							

#### **Performance –**

FEA Performance Reference Model (PRM)

Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Customer Benefit	Customer Satisfaction	Customer satisfaction for ITC Hosting customers	70% satisfaction	10% increase in satisfaction	17% increase in customer satisfaction
2006	3.1 Advance understanding and predict changes in the Earth's environment	Mission and Business Results	Financial Management	Reporting and Information	Customer data storage availability.	Implementation of President's Management Agenda.	Deploy data warehouse server in response to NFR NOAA 2005-05 and	Data warehouse server deployed in 1st quarter FY 2006.

	to meet America's economic, social, and environmental needs.						NFR NOAA 2005-06.	
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Processes and Activities	Cycle Time and Resource Time	Cycle Time	Full system backups are critical to successful recovery of systems	Full backups taking greater than 10 hours	Reduce full backups to less than 4 hours	Full backups are taking 3.8 hours
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Processes and Activities	Security and Privacy	Privacy	Customer data storage availability.	CBS Production systems, training system and application interface development system	Tech Refresh of production systems with 2 HP Alpha ES80 and EVA5000 storage arrays for CBS.	Devices installed and implemented 1st quarter Fy2006
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Reliability and Availability	Availability	System availability	95% system availability	2% increase in system uptime?	97.8% system availability
2007	3.1 Advance understanding and predict changes in the Earth's environment to meet	Customer Results	Customer Benefit	Customer Satisfaction	Customer satisfaction for ITC Hosting customers	77% satisfaction	10% increase in satisfaction	TBD

	America's economic, social, and environmental needs.							
2007	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Service Accessibility	Access	Concurrent customer access	Single front-end systems - 800 users	100% increase in concurrent users via load balancing across multiple servers	100% increase in concurrent users via load balancing across multiple servers
2007	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Processes and Activities	Security and Privacy	Security	Customer data security and privacy between operational and D-R site	Data backups transported by contract courier between Operational and D-R sites	Encrypted communications with real-time transaction-level database replication to D-R site	TBD
2007	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Reliability and Availability	Availability	System availability	97% system availability	1% increase in system uptime	TBD
2008	3.1 Advance understanding and predict changes in the Earth's environment to meet America's	Customer Results	Customer Benefit	Customer Satisfaction	Customer satisfaction for ITC Hosting customers	85% satisfaction	10% increase in satisfaction	TBD

	economic, social, and environmental needs.							
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Reliability and Availability	Availability	System availability	98% system availability	1% increase in system uptime	TBD

### 2.3 Reviews

### 2.4 Security

Certification performed in accordance with section 3 of the DOC Information Security Manual and Federal Information Processing Security Publication 102.. Accreditation guidance is taken from the National Information Assurance Certification and Accreditation Process (NIACAP) Last Review 12/2003 The next C&A is scheduled with the NOAA/OCIO IT Security Office to be completed by June 30, 2007

There have been significant changes to the investment since the C&A was completed in December 2003. The primary platforms for CBS (NOAA Financial System) and CBS Data Warehouse (Financial reporting) were replaced. In the 12/2003 C&A, these were HP Alpha GS140s, which were replaced with HP Alpha ES80s in November 2005. Financial systems storage was a single array, which has been replaced with multiple higher performance arrays. System backups for primary, secondary, and tertiary platforms have been consolidated from standalone DLT/SDLT backups onto LTO-2 Robotic Tape Libraries for improved management. Security has been improved through implementation of paired-redundant F5 Networks 6400 Load Balancers/ReDirectors, and all SSL has been moved from servers to the F5 6400 using FIPS 140-2 SSL The F5s also include Advanced Client Authentication to provide authentication for access to NOAA resources prior to UserID-Password challenge by hosted applications. Sun Microsystems servers have been replaced to improve security and increase availability. Firewalls have been replaced with higher performance firewall appliances supporting AES-encrypted VPN tunnels. Financial system external exposure remains the same with application servers available to the Internet only via specifically authorized IP-addresses for NOAA users not connected to NOAA's Financial Intranet. Database server access is available only via applications servers or direct via NOAA-intranet (no routes to/from Internet) with direct access restricted by IP-address to CFO Read-Only reporting platforms. The Change Control Request (CCR) process has been revamped and incorporates automated routing to include Requestor, Peer Reviewer, ISSO Reviewer, Director Approval, Requestor Change Completion, and ISSO Verification following performance of post-change network scans. The CCR process now includes identification and tracking of all system patches to assure they are applied correctly,

they address the vulnerability identified, and introduce no new vulnerabilities. These improvements have resulted in the reduction of Notification of Findings and Recommendations (NFRs) resulting from the annual Financial IT Audit from thirteen in FY2005 to two in FY2006.

Other changes include replacement of the NOAA Information Technology Center physical security system and the addition of video cameras and 24-hour monitoring by the Commerce Office of Security Command Center. An Anti-Terrorist Risk Assessment was performed for the facility in April 2004, which identified weak areas which were addressed in the physical security upgrade. The latest Independent Risk Assessment was completed on August 17, 2005 resulting in the determination that of 183 security controls, 164 applied to the NOAA Information Technology Center, of which 145 were full implemented, 9 were partially implemented and 10 were not implemented. Overall Risk was determined to be Low. All 164 security controls have been addressed since completion of this assessment.

## **2.5 Performance Measures**

This initiative is an operations, maintenance, and support services project for an existing technology center. As such earned Operational Analysis applies for this investment.

Information Systems Management Offices (ISMO) conducts continuous operational analysis of the investment in the Information Technology Center.

ISMO performs regular cost, schedule, and performance reviews of the functions and programs at the Information Technology Center. These reviews ensure that the critical functions of the ITC in support of NOAA's administrative and management functions are performed with efficiency and effectiveness.

The investment is a central component to meeting the "Organizational Excellence" goal of the NOAA Strategic Plan. ITC operates all of the major administrative and management systems in NOAA and therefore is critical to achieving any level of organizational excellence in NOAA.

The ITC contractor provides a weekly status report, as well as a monthly management report, in accordance with the contractor management plan. Performance metrics are developed on each functional activity of the contract. The COTR monitors the results of contractor performance against the performance metrics. The contract is structured to include incentives and dis-incentives which are directly related to performance. Baseline metrics ensure a minimum level of quality is identified. Disincentives result in the failure to meet minimum level of performance.

Bi-monthly, ITC management conducts a meeting with primary customers to review key issues important to customers and ITC personnel. An Action Items report is generated for each meeting. Key performance activities such as installing new Operating Systems are closely coordinated with key customers and end users.

All operational systems at the center are continually monitored. In addition, an hourly system check is performed by operations personnel on a 24 hour cycle. Abnormal conditions are reported to responsible lead personnel and ITC management.

During each monthly cycle a commitments and obligations report is generated from the CBS accounting system and delivered to the ISMO administrative officer and the NOAA CFO. Deviations from expected norms are communicated to the NFA CIO for review and action.

The top management of the ITC are integral members of the ISMO Enterprise Architecture Board. Their participation ensures that future plans and acquisitions are in keeping with the ISMO target architecture.

Microsoft Project is used to manage this project.

All performance metrics are within nominal levels of variance. Recent major Technology Migration activities were completed in accordance with customer requirements and on schedule. Cost metrics are within 5% of variance.

### 3.0 Financial Performance

#### 3.1 Current Performance vs. Baseline

NOAA/OCIO Financial Management IT Operations tracks commitment funding and uses data from the Commerce Business System (CBS) to track obligations and commitments.

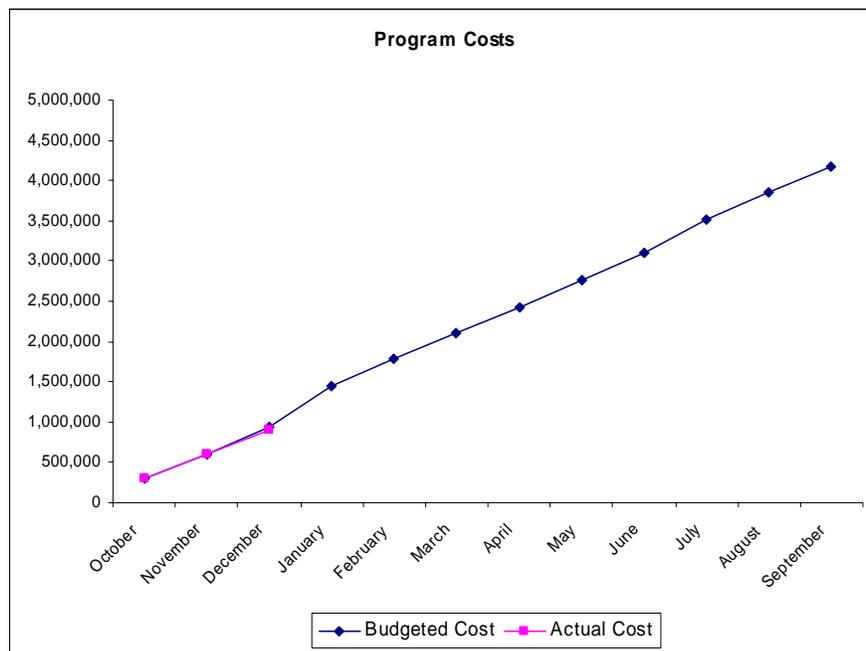


Figure 1:

Actual Costs

Budget vs

#### 3.2 Performance Measures

Via the PPBES Quad Chart reporting, program performance measures are mapped to project milestone activities, planned and obligated budget spending, and any risks or issues with mitigation strategies.

#### 3.3 Cost Benefit Analysis

In 2006, NOAA CIO Office implemented a process by which the PPBES Goal Team Leads annually provide planned costs for IT. The responses to the cost matrix are coordinated by the Goal Team Leads (e.g., Climate Program Office) and would be used to assess the impact of alternatives proposed to meet gaps in Program capabilities. IT planning costs are estimated in parallel with the Program Operational Plans (POPS) planning phase of the PPBES process.

### **3.4 Financial Performance Review**

On an annual basis, the ITC Director meets with the ISMO Director and CFO representatives to identify technical refresh requirements for software, hardware, and services to meet steady state operations within the ITC's baseline IT budget. These requirements are prioritized and implemented as budgeted.

Monthly budget reviews are held with the ITC Director (program manager), CORs and contract managers to ensure contracts are within cost and on schedule. Monthly reports from contractors are required to ensure the Government has the information it needs to evaluate cost performance. A detailed review of work and priorities is undertaken if cost is significantly above base lined values. Also, any necessary corrective actions are identified and implemented.

### **4.0 Innovation to Meet Future Customer Needs**

[Describe the new innovation and initiatives that anticipate changing customer needs. Sample language follows, which you use and modify where applicable:]

The following projects have been implemented in FY2006, or are being implemented in FY2007 to address future challenges, better meet customer needs, make better use of technology, and lower operating costs.

**Facilities:** The ITC physical security system is being upgraded in FY2007 to include use of access badges at both points of egress and an additional video camera for improved coverage of the front window area of the facility.

**System Backups:** Backups were fully consolidated onto a Robotic Tape Librarian in FY2006 and server-specific backups were eliminated. In FY2007, we have upgraded the Tape Librarian through replacement of the previous SDLT unit with an LTO II unit. This has reduced media requirements by 60% and reduced backup time by 35%.

**System Availability:** In FY2006 system availability was improved for users through implementation of redundant-paired F5 Networks Load Balancers, which allow access to multiple application servers through a single Internet address (i.e. finapps.rdc.noaa.gov).

**Security Management:** In FY2007 all SSL certificates and functionality were moved from servers to the F5 Networks devices to reduce and simplify licensing and provide FIPS 140-2 compliant SSL.

### **4.1 Number and Types of Users**

NOAA's Commerce Business System (CBS) supports users throughout NOAA, BIS, and EDA. NOAA users total approximately 6,800 including users of CFS, Travel Manager, and Bank Card (IMPAC/VISA). BIS and EDA each have approximately 60 users.

**Expanding System Concurrency:** As the number of system users has grown, the capacity of individual application servers has been reached, resulting in scheduling use by Time zone to limit concurrent use during peak, year-end periods. In FY2007, the ITC has implemented F5 Networks load balancers to distribute the user load over multiple application servers allowing all users concurrent access. The database platforms were replaced in FY2006 through technology refresh and were sized to handle significantly increased concurrency.

## **4.2 Consolidation with Commerce**

In FY2008, CBS will be consolidated Commerce-wide at the Census Bureau. Current database platforms will be relocated to the Census facility with user account and access management being retained by the ITC.

Secure Communications with the Consolidated Data Center: Access from NOAA to the Consolidated Data Center (CDC) will be via the ITC using an encrypted VPN across 100Mbps Transparent LAN Service (TLS). User challenge and authentication will require additional effort to assure authenticity And access permission.

## **4.3 Funding Levels**

Recent trends in government spending indicate that agencies should not expect significant increases in their budgets. This, coupled with the requirement to accommodate more users and incorporate evolving technology, will force the program to find efficiencies and to do more with the same amount of resources.

Reducing Operations Costs: *Reduce the cost of operations while maintaining effective staffing levels*

In FY2007 the program has reduced backup management and media costs through implementation of an LTO II Robotic Tape Librarian with greater throughput using higher-density media, which allows all platforms to be backed up in a consistent manner. This has reduced overall media costs and operational costs.