

National Oceanic and Atmospheric Administration
NOAA Consolidated Information Technology (IT) Infrastructure
006-03-02-00-01-0511-00
Operational Analysis
January 2006 – December 2006

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Executive Summary

NOAA Information Technology (IT) Mission Statement

Develop and maintain an Information Technology Enterprise that does the following: fully supports the life cycle NOAA's programs; is secure, reliable and cost-effective; encourages information sharing and complies with all applicable polices

NOAA Mission Support Information Technology (IT) Mission Statement

Increase internal and external available reliability security and use of NOAA information technology and services

As explained in the Department's Consolidated IT Infrastructure Exhibit 300, IT Infrastructure program has four objectives: 1) to operate and maintain an evolving infrastructure that supports mission objectives; 2) to improve services so that we have timely, reliable, secure, innovative, and cost-effective access to Commerce information technology when and where we need it; 3) enable all Commerce employees to fulfill their responsibilities efficiently and effectively; and 4) to streamline and unify our IT Infrastructure investments.

1.0 Customer Results

1.1 Customer Requirements and Costs

NOAA's IT Infrastructure serves diverse customers.

The IT Infrastructure computing resource needed to support NOAA's program is a steady state investment. It is critical to provide an infrastructure that delivers products and services using information technology solutions that meet the needs of the science and administrative personnel.

IT Technical refresh is performed based on established industry practices, routinely on a 3 year cycle for desktops, and 4 years for server systems and communications equipment due to their higher cost. NOAA Research desktop operating systems include Linux, MacIntosh, and Windows. According to Gartner (**Use Processes and Tools to Reduce TCO for PCs, 2005-2006 Update, 13 January 2006**), PC hardware and operating system choices are no longer the greatest determinants of PC total cost of ownership (TCO). The implementation of policies, best practices and processes offers the main opportunities for enterprises to reduce the TCO of their PC installed base across its life cycle.

1.2 Performance Measures

2.0 Strategic and Business Results

2.1 NOAA Information Technology Services Helps to Achieve Strategic Goals

Selected Information Technology Services accomplishments that demonstrate NOAA IT Infrastructure ability to help achieve NOAA Strategic Goals, across all goals:

- Enterprise Network Operations network availability is 99.5 %
- Upgraded the NOAA DC-area Internet connection to handle severe weather
- Clustered 8,000+ mailboxes (almost ½ of NOAA) onto NOAA consolidated email servers
- Managed more than 40 business applications (e.g. Commerce Business System) in the Information Technology Center
- Redesigned the NOAA.gov Banner for a OneNOAA Web Presence
- Initialed the NOAA Storm Portal for the OneNOAA Web Presence
- Achieved a 30% decrease in “Failure to Act” incidents
-

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. At the Line Office level, the Climate Program Office provides management oversight for the Climate Goal Programs (Observations and Analysis, Climate Forcing, Projections and Predictions, Ecosystem, Regional Decision Support).

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.

Quarterly, Quad Charts are prepared for the NOAA Budget Office to track Cost, Schedule, and Performance, and update the NOAA CFO and PA&E on Risks and Issues and mitigation strategies.

Below is a sample form the Observations and Analysis POP submitted in April 2006.

Cost: POP Current Program Resources

NOAA Consolidated IT Infrastructure
OA for 2006

| | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | TC | BOE |
|---|------|------|------|------|------|------|------|------|------------------------|-----|
| MS-ITS IT Administration and Regulation | | | | | | | | | Attached Documents [0] | |
| Funding (\$K) | 1650 | 1650 | 1650 | 1650 | 1650 | 1650 | 1650 | 1650 | | |
| FTE | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | |
| NOAA Corps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| NOAA IT Program Management Office | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Coordination, Management, and Oversight | 1650 | 1650 | 1650 | 1650 | 1650 | 1650 | 1650 | 1650 | | |
| MS-ITS IT Security | | | | | | | | | Attached Documents [0] | |
| Funding (\$K) | 1000 | 3050 | 3050 | 5050 | 5050 | 5050 | 5050 | 5050 | | |
| FTE | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| NOAA Corps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Centralized Certification & Accreditation Services | 0 | 0 | 0 | 2000 | 2000 | 2000 | 2000 | 2000 | | |
| NOAA Computer Incident Response Team | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Development & Management of IT Security Support Services | 1000 | 3050 | 3050 | 3050 | 3050 | 3050 | 3050 | 3050 | | |
| MS-ITS Enterprise Network Operations | | | | | | | | | Attached Documents [0] | |
| Funding (\$K) | 5123 | 5123 | 5123 | 5123 | 5123 | 5123 | 5123 | 5123 | | |
| FTE | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | |
| NOAA Corps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Conversion to Commerce-wide Common Electronic Mail System & Elimination of Single Points of Failure in Electronic Mail Services (via MOC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| New Telephone System for NOAA Silver Spring Metro Center Campus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| NOAAnet Single Enterprise Network | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Elimination of Single Points of Failure (Network SSMC) | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | | |
| Elimination of Single Points of Failure (Public Web Services PWS) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| NOAA Help Desk Consolidation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Telework in response to COOP Implementation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Enterprise Network Operations Support Services | 4898 | 4898 | 4898 | 4898 | 4898 | 4898 | 4898 | 4898 | | |
| MS-ITS Enterprise Architecture | | | | | | | | | Attached Documents [0] | |
| Funding (\$K) | 216 | 216 | 216 | 1216 | 1216 | 1216 | 1216 | 1216 | | |

| | | | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|
| FTE | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| NOAA Corps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| NOAA Enterprise Management Information System (NEMIS) | 0 | 0 | 0 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| OneNOAA Web Presence | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Development & Management of the NOAA Enterprise Architecture | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | |
| MS-ITS IT Support for Administrative Systems | | | | | | | | | Attached Documents [0] |
| Funding (\$K) | 15961 | 16132 | 16132 | 16314 | 16314 | 15460 | 15460 | 15460 | |
| FTE | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | |
| NOAA Corps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Current Program Total | 23950 | 26171 | 26171 | 29353 | 29353 | 28499 | 28499 | 28499 | |

Schedule: POP Program Schedule

| | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 |
|--|------|------|------|------|------|------|------|------|
| MS-ITS IT Security | | | | | | | | |
| Attached Documents [0] | | | | | | | | |
| IT Security: Provide IT Security Awareness & Role-Based Training | X | X | X | X | X | X | X | X |
| IT Security: Virtual Private Network Planning, Client Software, Servers, Maintenance | | | | | X | X | X | X |
| IT Security: High Speed Firewalls | | | | X | X | X | X | X |
| IT Security: N-CIRT Nationwide-HelpDesk/Forensic Data Base | | | | | X | | X | |
| IT Security: N-CIRT Intrusion Detection System | | X | X | X | X | X | X | X |
| IT Security: Assure C&A of 100% NOAA IT Systems | X | X | X | X | X | X | X | X |
| IT Security: Perform Vulnerability Assessments | | | | X | X | X | X | X |
| MS-ITS Enterprise Network Operations | | | | | | | | |
| Attached Documents [0] | | | | | | | | |
| PHONE: Prepare Final Request for Proposal (RFP) for Telephone System | | X | | | | | | |
| PHONE: Provide on site assistance for office moves and reconfigurations | | | X | X | X | X | X | X |

| | | | | | | | | |
|--|----|---|---|---|---|---|------------------------|---|
| PHONE: Respond to and reconcile trouble reports | | | X | X | X | X | X | X |
| PHONE: Coordinate system maintenance and technology upgrades | | | X | X | X | X | X | X |
| NOAAnet: Complete the transition of all NOAA Line Office Wide Area Networks (WANs) to the NOAAnet Single Enterprise Network | | | X | | | | | |
| Other: Complete the implementation of a 10 Gigabit Ethernet SSMC backbone & 10 Gigabit Ethernet Wash DC metropolitan area network (MAN) | | | | | | X | | |
| NOAAnet: Provide multiple transparent external connections throughout the nation, by maintaining up to 4 ISP large scale connections through NOAAnet | | | | X | | | | |
| Other & NOAAnet: Complete the hardening of the SSMC backbone and NOAAnet in order to produce a 99.99% uptime network | | | | | | | | X |
| Other: Complete phase two of the consolidated Electronic Mail system, including complete redundancy and replication of data for all users | | | | | X | | | |
| | | | | | | | | |
| PHONE: Complete Cutover to New System | | | X | | | | | |
| PHONE: Begin Phased Cutover | | X | | | | | | |
| PHONE: Release RFP to Industry | | X | | | | | | |
| PHONE: Conduct Bidders Conference | | X | | | | | | |
| PHONE: Evaluate Responses and Select Vendor | | X | | | | | | |
| PHONE: Plan and Coordinate Numbering Plan | | X | | | | | | |
| PHONE: Conduct Site Inspection and Facilities Preparation | | X | | | | | | |
| PHONE: Develop Implementation Plan and Cutover Schedule | | X | | | | | | |
| PHONE: System Administration Training | | X | | | | | | |
| PHONE: Develop Training Plan & Instruction | | X | | | | | | |
| PHONE: Initial Cutover (limited) | | X | | | | | | |
| | | | | | | | | |
| MS-ITS Enterprise Architecture | | | | | | | Attached Documents [0] | |
| NEMIS: Explicit inclusion of MIS in NOAA enterprise target architecture | Q4 | | | | | | | |
| OneNOAA: Create a content management structure to create and maintain Web content specific to internal Web customers | X | | | | | | | |
| OneNOAA: Continue maintenance contract for universal licensing of Stellent UCM solution | X | | | | | | | |
| OneNOAA: Conduct analysis of NOAA's Web architecture | X | | | | | | | |
| OneNOAA: Create an inventory of NOAA's Web technology assets | X | | | | | | | |
| OneNOAA: Establish performance metrics for asset consolidation | X | | | | | | | |
| OneNOAA: Conduct usability testing to establish baseline for scope of consolidation efforts | X | | | | | | | |

| | | | | | | | | |
|--|----|----|----|----|---|---|---|---|
| OneNOAA: Establish training for various levels of governance | X | X | | | | | | |
| OneNOAA: Integrate WFM instruments to Governance structure (i.e., performance plans, PDs, IDPs, etc.) | X | X | | | | | | |
| OneNOAA: Hold ad hoc training and workshops to promote awareness and use of specific Web technologies and applications | X | X | X | X | X | X | X | X |
| OneNOAA: Hold internal Web conference to promote NOAA's Web program | X | | | | | | | |
| OneNOAA: Use existing and open-source technologies to promote use and interoperability of NOAA external Web sites | | X | X | X | X | X | X | X |
| OneNOAA: Acquire additional technology to promote a robust atmosphere for use and interoperability of NOAA's external Web information assets | | X | X | X | X | X | X | X |
| OneNOAA: Develop Web architecture to support MyNOAA concept | | | X | | | | | |
| OneNOAA: Execute MyNOAA concept for external sites | | | X | X | X | X | | |
| OneNOAA: Begin integration of other NOAA systems to Intranet environment (i.e., BPM, Mail, Calendar) | | X | | | | | | |
| OneNOAA: Execute Web consolidation plan | | X | X | X | X | X | X | X |
| OneNOAA: Establish rotational staff to support internal content contribution and consolidation from NOAA subject matter experts | Q3 | | | | | | | |
| OneNOAA: Establish Leadership position for management of NOAA's internal Web assets | Q2 | | | | | | | |
| NEMIS: Project plan | | Q4 | | | | | | |
| NEMIS: Project website & Inventory databases | | | Q1 | | | | | |
| NEMIS: MIS & mgt info product inventories, v1, analysis | | | Q2 | | | | | |
| NEMIS: Prototype dashboard instrument(s) | | | Q2 | | | | | |
| NEMIS: Requirements analysis | | | Q2 | | | | | |
| NEMIS: Baseline architecture | | | Q2 | | | | | |
| NEMIS: Target architecture & data dictionary, v1 | | | Q3 | | | | | |
| NEMIS: Suite 1, dashboard instruments | | | Q3 | | | | | |
| NEMIS: Data storage acquisition | | | | Q1 | | | | |
| NEMIS: MIS & mgt info product inventories, v2, analysis | | | | Q1 | | | | |
| NEMIS: Suite 2, dashboard instruments | | | | Q2 | | | | |
| NEMIS: Operational business process | | | | | X | X | X | X |
| OneNOAA: Establish Leadership position for management of NOAA's external Web assets | Q2 | | | | | | | |
| OneNOAA: Establish rotational staff to support external content contribution and consolidation from NOAA subject matter experts | Q3 | | | | | | | |
| OneNOAA: Redesign NOAA.gov site and create standard branding for all high-level NOAA sites | Q3 | | | | | | | |

| | | | | | | | | | |
|--|----|----|----|----|--|--|------------------------|--|--|
| OneNOAA: Implement FirstGov search solution for external sites | Q2 | | | | | | | | |
| MS-ITS IT Support for Administrative Systems | | | | | | | Attached Documents [0] | | |
| IT Support: Complete Deployment of Grants Online to Grantees | Q4 | | | | | | | | |
| IT Support: Complete C&A of Grants Online System | Q4 | | | | | | | | |
| IT Support: Establishment of Mirror facilities for HQ Data storage | | Q1 | | | | | | | |
| IT Support: Migration of NOAA.....s CBS system from ITC to Census Bowie | | | Q3 | | | | | | |
| IT Support: Consolidation and migration of administrative servers to ITC data center | | | | Q2 | | | | | |

Performance: POP Current Program Outputs

| | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | |
|---|------|------|------|------|------|------|------------------------|------|--|
| MS-ITS IT Administration and Regulation | | | | | | | Attached Documents [0] | | |
| IT Capital Planning & Investment Control Process operating at a Capability Maturity Model Score of: | 3.75 | 3.75 | 3.75 | 4 | 4.25 | 4.25 | 4.5 | 4.5 | |
| IT Administration & Policy Process operating at a Capability Maturity Model Score of: | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | |
| MS-ITS IT Security | | | | | | | Attached Documents [0] | | |
| Percentage of NOAA IT Systems that have a current Certification & Accreditation | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| Decrease the number of IT Security Incidents resulting from inactivity (failure to patch, configure system, etc.) | 681 | 647 | 615 | 584 | 555 | 527 | 501 | 476 | |
| MS-ITS Enterprise Network Operations | | | | | | | Attached Documents [0] | | |
| Percentage of Available Network and Application Services | 99.5 | 99.7 | 99.7 | 99.8 | 99.8 | 99.9 | 99.9 | 99.9 | |
| MS-ITS Enterprise Architecture | | | | | | | Attached Documents [0] | | |
| Enterprise Architecture Process operating at a Capability Maturity Model Score of: | 3.5 | 3.75 | 3.75 | 4 | 4.25 | 4.5 | 5 | 5 | |
| Percentage of users on the NOAA Enterprise Management Information System (NEMIS) | 0 | 10 | 30 | 45 | 55 | 75 | 85 | 100 | |

| | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|------------------------|
| MS-ITS IT Support for Administrative Systems | | | | | | | | | Attached Documents [0] |
| Information Technology support for NOAA Enterprise level systems / on servers | 34/69 | 34/69 | 33/63 | 32/55 | 32/55 | 32/55 | 32/55 | 32/55 | 29/55 |
| % Office automation, help desk, network, and security support for desktops locations across the country | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

2.3 Reviews

NOAA/Department of Commerce Review Process.

March 2006. DOC Acquisition Review Board (ARB) review of the NOAA IT Consolidated Services (renamed Streamlined IT Performance Services (STRIPES)) in March 2006 and DPA approval in September 2006. This Infrastructure Optimization Initiative provides NOAA Research with a \$67 million ceiling to meet current and planned business infrastructure and scientific computing infrastructure support services requirements. A projected phase-in schedule for task orders under this contract is planned over a 6 year period of performance. Services currently supported within the labs and allowed under this contract include HPC Programming Support, Help Desk for Scientific Computing Support, Programmatic Application Support, Environmental Modeling, IT Security (Architecture, implementation, internal testing, documentation, C&A coordination, O&M, and Contingency and D/R planning and testing), Technical Consulting Services (IT Studies, Assessments, Training), and the Boulder Campus Infrastructure Support (ESRL).

NOAA Review Process.

NOAA CIO Council Review Process. Each Line Office is represented by its CIO . The NOAA CIO Council meets weekly face-to-face to discuss the management and technical issues and challenges associated with DOC and NOAA policy as it impacts NOAA wide enterprise IT planning, IT security/information assurance, enterprise messaging, network services , acquisition strategies, and web presence. The Council Committees for Information Technology Security, Enterprise IT Architecture, Network Advisory, Geospatial Information, Enterprise Messaging, Web Services, and High Performance Computing & Communications meet at least quarterly to evaluate and share technical solutions across NOAA.

IT investments are refreshed with the periodic replacement of COTS components; e.g., processors, displays, computer operating systems, commercially available software (CAS), and communications capabilities within larger systems to assure continued supportability of that system through an indefinite service life under the following criteria:

- existing system component has malfunctioned and either cannot be repaired, or the repair costs exceed the replacement costs,
- existing system component has reached its life expectancy
- surrounding technical infrastructure has evolved and is incompatible with the existing component under consideration,
- newer technology has come to market that provides more capability for the same or lower Total Cost of Ownership, and
- requirements of the system have evolved to the extent that the system cannot meet the requirements with the existing technology

2.4 Security

Within IT Infrastructure, 58 systems are listed. 48 systems are accredited under requirements spelled out in NOA 212-13 (08/06/90) that is based on OMB and NIST guidance. Attachment A provides the dates for System Plans, Risk Assessments and Contingency Plans certification and approval and the Management Operational and Technical security controls that are adequate to ensure the confidentiality, integrity and availability of information.

2.5 Performance Measures

Performance management at the NOAA corporate level consists of a suite of performance measures called Corporate Performance Measures (CPMs). These performance measures help the NOAA Administrator and senior management ensure the organization is moving towards strategic planning goals and outcomes, and organizational priorities. CPMs focus on high-level Program and Goal outcomes and the performance objectives that lead to these outcomes. They should serve to communicate NOAA's corporate performance to external audiences and provide a basis for the internal evaluation of NOAA's progress to plan.

| iscal Year | Strategic Goal(s) Supported | Measurement Area | Measurement Category | Measurement Grouping | Measurement Indicator | Baseline | Planned Improvement to the Baseline | Actual Results |
|------------|-----------------------------|------------------------------|-------------------------------|-------------------------------|---|---|---|----------------|
| 2006 | Mission support | Mission and Business Results | IT Management | | Increase the number of institutionalized best practices | 0 0 0 0 | Tier 1 Helpdesk Tier 2 Helpdesk Tier 3 Helpdesk Applications Support | |
| 2006 | Mission support | Mission and Business Results | IT Infrastructure Maintenance | IT Infrastructure Maintenance | Cost of IT Infrastructure for current mission levels | TBD | 0% | |
| 2006 | Mission support | Customer Results | Service Coverage | Service Coverage | Number of fully unified helpdesk operations | 0 | Phase-in schedule for all 19 helpdesk Operations | |
| 2006 | Mission support | Customer Results | Service Coverage | Service Coverage | Percentage of migrated users for Email consolidation | Complete move of an additional 2000+ mailboxes to MOC cluster | | |

| | | | | | | | | |
|-----|-----------------|------------------------------|---------------------------------------|--|--|---|---|------------|
| 006 | Mission support | Customer Results | Service Coverage | Service Coverage | Reduce the number of Email servers | | Reduce total number of servers down to 38 | 38 servers |
| 006 | Mission support | Processes and Activities | Financial (Processes and Activities) | Financial (Processes and Activities) | Reduce the number of contracts required to meet IT support services | 29 Contracts (helpdesk operations – 14 NOAA – 3 OAR – 5 NOS -7 | 1 six year contract regardless of value of the task order | |
| 006 | Mission support | Technology | Financial (Process and Activities) | Financial (Processes and Activities) | HelpDesk Services in DC Metro area: reduce the number of contractor staff by developing centers of excellence and applications “experts” | 109 Customer Support Representatives (71 Contractors; 38 Federal employees) | Establish “shared” experts across all 19 helpdesk operations | |
| 006 | Mission support | Process and Activities | Knowledge Management | Knowledge Management | All NOAA employees complete 2006 IT security awareness course by February 16, 2006 | | | |
| 006 | Mission support | Customer Results | Service Quality | Accuracy of Service or Product Delivered | Help Desks are providing initial customer response and problem resolution within established performance guidelines | TBD | 5% increase over old baseline | TBD |
| 006 | Mission support | Customer Results | Timeliness and Responsiveness | Response Time | Establish and monitor compliance/performance of policy, MOUs, SLAs, and OLAs in all program areas of IT infrastructure | TBD | Add 1-2 MOU/SLA/OLA per year as the standard for defining performance-based IT Infrastructure services | TBD |
| 006 | Mission support | Mission and Business Results | Controls and Oversight | Program Evaluation | Keep inventory control and IT governance items due. Track whether IT governance meets its deadlines (e.g. program artifacts, data calls, etc). | TBD | If previous year baseline is less than 95%, require 10% improvement. | TBD |
| 006 | Mission support | Mission and Business Results | Information and Technology Management | IT Infrastructure Maintenance | Number of IT Infrastructure Projects Initiated | 2 | 2 each year | |
| 006 | Mission support | Processes and Activities | Financial (Processes and Activities) | Costs | Total IT infrastructure costs as % of IT Budget | 26% | Not Exceed 58% | |
| 006 | Mission support | Processes and Activities | Management and Innovation | Innovation and Improvement | NOAA IT Policies are well-communicated with the affected IT community | TBD | Evidence of 5 steps taken regarding qualitative process improvement, or a new performance measurement, in the area of policy communication, compliance and effectiveness. | TBD |
| 006 | Mission support | Processes and Activities | Security and Privacy | Privacy | Assess current policies and status of compliance regarding protection, and unauthorized disclosure and access of privacy (PII) data. | TBD | Monitor and ensure 100% compliance with OMB and White House direction. | TBD |
| 006 | Mission support | Processes and Activities | Security and Privacy | Security | Establish performance expectations for the deployment of security patches to the desktop and server OS | TBD | Monitor and maintain deployment of new patches within NOAA IT Security policy standards | TBD |

| | | | | | | | | |
|-----|-----------------|------------------|------------------------|--------------------------------------|--|---------|--|-----|
| 006 | Mission support | Technology | Financial (Technology) | Licensing Costs | Demonstrate improvement in product specifications, efficiency of management, and cost savings by moving to NOAA-wide enterprise site licenses. | TBD | Demonstrate and analyze at least one program license per year. | TBD |
| 006 | Mission support | Technology | Financial (Technology) | Overall Costs | Average IT OA cost per FTE | \$1,679 | Not to exceed 20% of the previous fiscal year | |
| 007 | Mission support | Customer Results | Service Coverage | New Customers and Market Penetration | HCHB Network: Percentage of migrated users to the HCHB network | | 100% | |
| | | | | | | | | |

3.0 Financial Performance

3.1 Current Performance vs. Baseline

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.

Information Technology Services FY2006 Planning Estimates are included as a table below.

| Area | Measure | Cost/Unit | | | | | |
|------|---------|-----------|--|--|--|--|--|
|------|---------|-----------|--|--|--|--|--|

| | | | | | | | |
|---------------------------------|--------------|-----------------|--|--|--|--|--|
| Archiving | Terabytes | \$1,100 | | | | | |
| Data Networks (LAN) | Employees | \$240 | | | | | |
| Desktop Management | Employees | \$4,100 | | | | | |
| Enterprise Architecture | Employees | \$110 | | | | | |
| IT Security | Employees | \$1,900 | | | | | |
| HPC | | | | | | | |
| Metadata | N/A | N/A | | | | | |
| NOAAnet | Employees | \$720 | | | | | |
| Tech Refresh (Desktops/Laptops) | Employees | 1/4 * \$2000 | | | | | |
| Tech Refresh (Server) | 1/3 # | 10K-50K | | | | | |
| Tech Refresh (Mainframe) | 1/3 to 1/5 # | 200K-1M | | | | | |
| Tech Refresh (Router) | 1/5 # | 8K-80K | | | | | |
| Tech Refresh (Switch) | 1/5 # | 5K-70K | | | | | |
| Tech Refresh (storage) | 1/3 to 1/5 # | 10K-1M | | | | | |
| Telecom | Employees | \$480 | | | | | |
| Web Presence | Employees | \$320 | | | | | |
| Workforce Collaboration | Employees | \$535 | | | | | |
| TOTAL | | | | | | | |

Includes HPC E300 budget. HPC is not under the Scientific Computing Support E300.

3.4 Financial Performance Review

On an annual basis, the Line Office report to the NOAA CIO to identify technical refresh requirements for software, hardware, and services to meet steady state operations within the IT Support Services baseline IT budget. These requirements are prioritized and implemented as budgeted.

4.0 Innovation to Meet Future Customer Needs

Onsite partnerships provide a unique opportunity for close collaboration, while sharing infrastructure costs, equipment, and personnel to make better use of technology and lower operating costs.

The Streamlined IT Performance Services (STRIPES) acquisition is a direct result of the NOAA CIO Council’s strategy to more effectively and efficiently manage IT services and aligned with the Department’s IT Infrastructure program. The program’s mission is to create a Commerce IT infrastructure capability that is “mission driven, managed, visible, appropriate, balanced, aligned, and integrated with mission and technical management strategic direction, governance structure and processes”. Like the Department CIO’s Commerce Enterprise Architecture program and Capital Planning and Investment Control program, the IT Infrastructure program is charged with identifying opportunities for collaboration where common ground exists.

As one of the NOAA CIO Council's FY2006 priorities, this investment will facilitate efforts to consolidate, integrate and coordinate contractual IT support services (i.e. help desk) across NOAA organizations. IT support services are a prime example of where common ground exists between NOAA organizations to meet agency goals. A NOAA-wide acquisition vehicle can provide an opportunity to leverage resources for these investments that reduce costs for these services, streamline the processes for obtaining these services, and provide a mechanism for managing the IT services using a centralized contracting approach.

The contractual support provided under this contract vehicle contributes to both the infrastructure assets within NOAA which support NOAA employees performing the day-to-day mission of the organization as well as very specific scientific activities in direct support of services such as the delivery of meteorological, oceanographic, hydrometeorological and climate services, science and technology advances in support or operations, and support for management of operational systems, engineering software management, facilities, communications and logical services.

4.1 Number and Types of Users

4.2 Funding Levels

Finding efficiencies to do more with the same amount of resources.

Last year, the breakout for the IT costs were: 4% for software; 14.5% hardware; 33.5% services; and 48% other (facilities and other). Of those costs, 3.7% were for IT Security.

Software Licensing and Maintenance. All of NOAA has benefited from NOAA Research's efforts to work with the NOAA Acquisition Community and COTS software publishers in negotiating enterprise software licensing BPAs and Contracts. These products can be costly since they serve a "niche" market of scientists and researchers.

For example, NOAA holds a contract for Interactive Data Language (IDL) – software for data analysis, visualization, and cross-platform application development. The original 5 year contract for IDL software was awarded in 2000 as site licensing to OAR and NESDIS. The contract was re-negotiated in 2006, and NWS NCEP was added as another "site". The commercial cost of a floating network license is \$3,900; a single license is \$3,000, and a node locked license \$2,400; pricing includes one year of maintenance. Under this contract, the annual renewal cost for over a 1000 programmers within these Line Offices was \$128,000 (approximately \$128 per user). NCEP's 200 users paid \$175 for a license and a year of maintenance under the new contract. The cost avoidance for NCEP alone, at single license fees, was 58%.

Appendix A

IT Security

| Name of System | Agency/ or Contractor Operated System? | NIST FIPS 199 Risk Impact level | Has C&A been Completed, using NIST 800-37? | Date C&A Complete | What standards were used for the Security Controls tests? | Date Complete(d): Security Control Testing | Date the contingency plan tested |
|---|--|---------------------------------|--|-------------------|---|--|----------------------------------|
| ARHQ Anchorage (NOAA8880) | Contractor and Government | High | Yes | 12/29/2003 | FIPS 200 / NIST 800-53 | 8/31/2006 | 8/15/2005 |
| Auke Bay, AK Local Area Network (NOAA4810) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/20/2006 |
| Center for Operational Oceanographic Products and Services (CO-OPS) - Local Area Network (NOAA6201) | Contractor and Government | Low | Yes | 9/22/2004 | FIPS 200 / NIST 800-53 | 4/24/2006 | 2/19/2005 |
| Coastal Services Center (CSC) Information Technology Support System (NOAA6101) | Contractor and Government | Low | Yes | 3/24/2004 | FIPS 200 / NIST 800-53 | 4/24/2006 | 2/3/2005 |
| Consolidated Logistics Sys (CLS) (NOAA1103) | Contractor and Government | Low | Yes | 12/22/2003 | FIPS 200 / NIST 800-53 | 8/30/2006 | 12/9/2003 |
| CRHQ Kansas City (NOAA8881) | Contractor and Government | High | Yes | 12/22/2003 | FIPS 200 / NIST 800-53 | 8/31/2006 | 8/15/2005 |
| Enforcement Local Area Network (NOAA4310) | Contractor and Government | Moderate | Yes | 3/8/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/28/2006 |
| ERHQ Bohemia (NOAA8882) | Contractor and Government | High | Yes | 12/29/2003 | FIPS 200 / NIST 800-53 | 8/31/2006 | 8/15/2005 |
| Galveston, TX Local Area Network (NOAA4410) | Contractor and Government | Moderate | Yes | 3/8/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/28/2006 |
| Gloucester, MA Local Area Network (NOAA4100) | Contractor and Government | Moderate | Yes | 8/26/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/31/2005 |
| Headquarters Local Area Network (NOAA4010) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/10/2005 |

| | | | | | | | |
|---|---------------------------|----------|-----|-----------|------------------------|-----------|-----------|
| Honolulu, HI Lab Local Area Network (NOAA4960) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| HQ Silver Spring - Shark (NOAA4020) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/20/2005 |
| Juneau, AK Local Area Network (NOAA4700) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/20/2006 |
| LaJolla, CA Local Area Network (NOAA4930) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| Long Beach, CA Local Area Network (NOAA4900) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| Message Operations Center (MOC) (NOAA0300) | Contractor and Government | Moderate | Yes | 8/25/2005 | FIPS 200 / NIST 800-53 | 7/28/2006 | 3/14/2006 |
| Metro Campus (SSMC) (NOAA6601) | Contractor and Government | Low | Yes | 3/29/2004 | FIPS 200 / NIST 800-53 | 4/27/2006 | 5/13/2005 |
| Miami, FL Local Area Network (NOAA4400) | Contractor and Government | Moderate | Yes | 3/8/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/28/2006 |
| Milford, CT Local Area Network (NOAA4220) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/31/2005 |
| Narragansett, RI Local Area Network (NOAA4210) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/31/2005 |
| National Centers for Coastal Ocean Science (NCCOS) Research Support System (NOAA6301) | Contractor and Government | Moderate | Yes | 4/1/2004 | FIPS 200 / NIST 800-53 | 4/28/2006 | 2/3/2006 |
| National Fishing Permit and Landings Reporting System (NOAA4011) | Contractor and Government | Low | No | 6/30/2007 | FIPS 200 / NIST 800-53 | 6/1/2006 | 5/31/2007 |
| National Geodetic Survey (NGS) General Support System (NOAA6401) | Contractor and Government | Low | Yes | 3/23/2004 | FIPS 200 / NIST 800-53 | 4/27/2006 | 2/3/2006 |
| National Marine Sanctuaries (NMS) Support System (NOAA6602) | Contractor and Government | Low | Yes | 3/24/2004 | FIPS 200 / NIST 800-53 | 4/21/2006 | 2/15/2005 |
| National Ocean Service (NOS) Enterprise Information System (NOAA6001) | Contractor and Government | Low | Yes | 3/29/2004 | FIPS 200 / NIST 800-53 | 4/20/2006 | 1/13/2005 |
| N-CIRT Network (NOAA0100) | Contractor and Government | Moderate | Yes | 12/9/2004 | FIPS 200 / NIST 800-53 | 8/30/2006 | 8/25/2005 |

| | | | | | | | |
|---|---------------------------|----------|-----|------------|------------------------|-----------|------------|
| NESDIS Headquarters Information Technology Support - Silver Spring, MD (NOAA5006) | Contractor and Government | Moderate | Yes | 12/29/2006 | FIPS 200 / NIST 800-53 | 5/5/2006 | 8/3/2006 |
| Network Operations Center (NOC) (NOAA0200) | Contractor and Government | Moderate | Yes | 8/25/2005 | FIPS 200 / NIST 800-53 | 8/24/2006 | 3/10/2006 |
| NMAO Land Based Support (NOAA2010) | Contractor and Government | Low | Yes | 9/30/2004 | FIPS 200 / NIST 800-53 | 8/30/2005 | 8/19/2005 |
| OAR Financial Data Management System (FDMS) (NOAA3110) | Contractor and Government | Low | Yes | 9/30/2005 | FIPS 200 / NIST 800-53 | 8/31/2005 | 8/31/2005 |
| OAR Headquarters (NOAA3000) | Contractor and Government | Low | Yes | 9/30/2005 | FIPS 200 / NIST 800-53 | 8/31/2005 | 8/31/2005 |
| OCIO HQ LAN (NOAA1102) | Contractor and Government | High | Yes | 12/18/2003 | FIPS 200 / NIST 800-53 | 8/30/2006 | 12/9/2003 |
| OCIO TASB (Boulder) LAN (NOAA1005) | Contractor and Government | Low | Yes | 12/18/2003 | FIPS 200 / NIST 800-53 | 8/30/2006 | 6/4/2003 |
| OCIO TASB (Kansas City) LAN (NOAA1104) | Contractor and Government | Low | Yes | 12/18/2003 | FIPS 200 / NIST 800-53 | 8/30/2006 | 10/31/2006 |
| OCIO TASB (Norfolk) LAN (NOAA1006) | Contractor and Government | Low | Yes | 12/22/2003 | FIPS 200 / NIST 800-53 | 8/30/2006 | 10/30/2006 |
| OCIO TASB (Seattle) LAN (NOAA1004) | Contractor and Government | Low | Yes | 12/18/2003 | FIPS 200 / NIST 800-53 | 8/30/2006 | 10/27/2006 |
| Office of Global Programs (NOAA3005) | Contractor and Government | Low | Yes | 9/30/2005 | FIPS 200 / NIST 800-53 | 8/31/2005 | 8/31/2005 |
| Office of Response and Restoration (ORR) Damage Assessment Center (DAC) Support System (NOAA6701) | Contractor and Government | Low | Yes | 3/25/2004 | FIPS 200 / NIST 800-53 | 4/27/2006 | 6/23/2005 |
| Office of Response and Restoration Support System - Seattle (NOAA6702) | Contractor and Government | Moderate | Yes | 8/17/2005 | FIPS 200 / NIST 800-53 | 4/28/2006 | 7/15/2005 |
| Pacific Grove, CA Lab Local Area Network (NOAA4950) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| Pacific Island Area Office, HI Local Area Network (NOAA4920) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| Panama City, FL Local Area Network (NOAA4440) | Contractor and Government | Moderate | Yes | 3/8/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/28/2006 |

| | | | | | | | |
|---|---------------------------|----------|-----|------------|------------------------|-----------|-----------|
| Pascagoula, MS and Stennis, MS Lab Local Area Network NOAA4420) | Contractor and Government | Moderate | Yes | 3/8/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/28/2006 |
| PRHQ Honolulu (NOAA8883) | Contractor and Government | High | Yes | 12/30/2003 | FIPS 200 / NIST 800-53 | 8/29/2005 | 8/15/2005 |
| Sandy Hook, NJ Local Area Network (NOAA4230) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/31/2005 |
| Santa Cruz, CA Lab Local Area Network (NOAA4940) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| Santa Rosa, CA Local Area Network (NOAA4910) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 3/1/2006 |
| Seattle DSX System (NOAA0600) | Contractor and Government | Moderate | Yes | 8/30/2006 | FIPS 200 / NIST 800-53 | 8/30/2006 | 8/30/2006 |
| Seattle, WA Enforcement Local Area Network (NOAA4520) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/20/2006 |
| Seattle, WA Local Area Network (NWFSC) (NOAA4600) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/20/2006 |
| Seattle, WA Local Area Network (NWR) (NOAA4500) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/20/2006 |
| Seattle, WA Local Area Network (AWRC) (NOAA4800) | Contractor and Government | Moderate | Yes | 3/5/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/20/2006 |
| SRHQ Fort Worth (NOAA8884) | Contractor and Government | High | Yes | 12/29/2003 | FIPS 200 / NIST 800-53 | 8/26/2005 | 8/15/2005 |
| St Petersburg, FL Local Area Network (NOAA4300) | Contractor and Government | Moderate | Yes | 3/8/2006 | FIPS 200 / NIST 800-53 | 8/11/2005 | 2/28/2006 |
| Wide Area Network (NOAA4000) | Contractor and Government | Moderate | Yes | 9/15/2005 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/10/2005 |
| Woods Hole , MA Local Area Network (NOAA 4200) | Contractor and Government | Moderate | Yes | 8/26/2004 | FIPS 200 / NIST 800-53 | 8/11/2005 | 8/31/2005 |
| WRHQ Salt Lake City (NOAA8885) | Contractor and Government | High | Yes | 12/23/2003 | FIPS 200 / NIST 800-53 | 8/26/2005 | 8/15/2005 |

**National Oceanic and Atmospheric Administration
 NOAA Fisheries
 IT Infrastructure
 006480200001230000
 Operational Analysis
 2006**

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NMFS IT Infrastructure Executive Summary

NOAA’s National Marine Fisheries Service (NMFS) Information Technology Infrastructure (ITI) directly supports the NOAA Ecosystems goal, whose mission is to Protect, Restore, and Manage the Use of Coastal and Ocean Resources Through an Ecosystem Approach to Management. NMFS is the lead federal agency in protecting, restoring, and managing living marine resources and their ecosystems. To balance economic, social, and environmental needs, we take an ecosystem approach to management. This approach strives to integrate all concerns, priorities, and expertise in the management of coastal and marine resources.

NMFS’s stewardship activities under this goal support NOAA performance objectives to:

- Increase number of fish stocks managed at sustainable levels
- Increase number of protected species that reach stable or increasing population levels
- Increase number of regional coastal and marine ecosystems delineated with approved indicators of ecological health and socio-economic benefits that are monitored and understood

- Increase number of habitat acres conserved or restored
- Increase portion of population that is knowledgeable of and acting as stewards for coastal and marine ecosystem issues.

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.

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 NMFS IT Infrastructure program provides the full suite of computing and communication services that enables NMFS scientific, administrative and technical staff to perform their day-to-day business processes to meet their mission requirements.

1.1 Customer Requirements and Costs

NMFS IT Infrastructure customers are the 4,364 NMFS staff and collaborators working to meet the NOAA mission requirements. They include scientists, managers, administrator, and IT staff, working in Headquarters, regional offices and laboratories, in the field, aboard ships and on travel attending meetings and seminars around the globe. Customer requirements include desktop seat management, onsite and remote telecommunications, and IT helpdesk support. The cost of providing this comprehensive wide-range of services is approximately \$28M per year or about \$6.5K per person.

1.2 Performance Measures

NMFS IT Infrastructure performance measures are listed in Table 1. The measures align with the “Customer Results Measurement Area” of the Performance Reference Model developed by the Federal Enterprise Architecture Program Management Office (FEA-PMO).

Table 1: Customer Results Performance Measure

| Measurement Area | Indicator | 2005 Baseline | 2006 Actual Result | Comments |
|-----------------------|---|-----------------|------------------------------------|--|
| Customer Requirements | Number of overfished major stocks of fish | FY05 Actual: 42 | FY06 Target: 42 FY06 Actual: 41 | Exceeded FY06 target (goal is to reduce number of stocks overfished) |
| | Number of major stocks with an “unknown status” | FY05 Actual: 74 | FY06 Target: 71 FY06 Actual: 72 | Improved from FY05 level but fell short of FY06 target |

| Measurement Area | Indicator | 2005 Baseline | 2006 Actual Result | Comments |
|------------------|--|------------------|--------------------------------------|----------------------|
| | Number of protected species designated as threatened, endangered or depleted with a stable or increasing population levels | FY05 Actual: New | FY06 Target: 24 FY06 Actual: 24 | Met FY-06 target |
| | Number of stocks of protected species with adequate population assessments | FY05 Actual: New | FY06 Target: 59 FY06 Actual: 60 | Exceeded FY06 target |
| | Number of habitat acres restored | FY05 Actual: 25K | FY06 Target: 24K FY06 Actual: 32K | Exceeded FY06 target |

2.0 Strategic and Business Results

The NOAA Fisheries' IT Infrastructure is meeting its own goals and objectives as well as those of the agency. Program management and controls are in place to ensure the program continues to meet its goals and objectives and monitor how well the infrastructure program performs.

2.1 NOAA Fisheries Infrastructure Helps to Achieve Strategic Goals

The infrastructure provides the IT components, tools and services required by its staff and collaborators to effectively collect, process, analyze, communicate, disseminate and archive the information required for them to meet their mission goals and performance metrics as indicated in Table 2. These performance measures are discussed in section 2.5.

2.2 Business Results

2.2.1 Program Management and Controls

NMFS IT Infrastructure provides a broad suite of hardware, software, communications, security and software development and help services to the broad spectrum of NMFS users located around the globe. Many of the services are provided on site by local personnel under local management. Oversight, monitoring and control over schedules, costs, resources, quality, and results is performed at the national and local levels through the Enterprise IT organization, spearheaded by NMFS CIO, that includes the National Information Management Board (NIMB), Regional Information Technology Coordinators (RITCs), The Office of the CIO and the HQ Office Information Technology Coordinators (OITCs).

The CIO, who serves as Director of the Office of the CIO, coordinates enterprise-wide IT and provides operational IT services to the Headquarters office. Regional Information Technology Coordinators (RITCs) coordinate and/or directly provide IT services for each Regional Office and Science Center. (See Figure 1) NOAA Fisheries IT Organization)

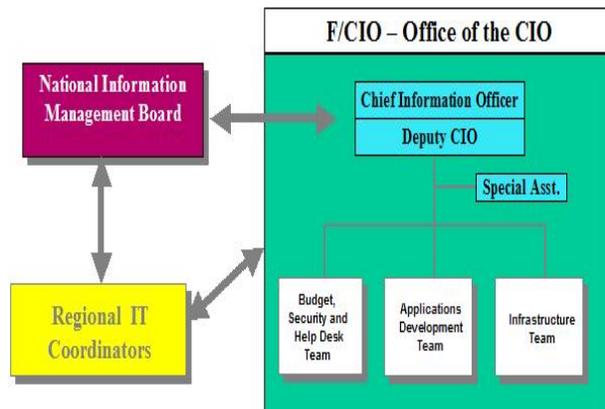


Figure 1: Fisheries Enterprise IT Organization

Office of the CIO (OCIO)

The CIO carries out the provisions of the Clinger-Cohen Act and other Federal IT regulations, and DOC and NOAA policies and guidelines pertaining to information management (IM). Other major responsibilities, carried out in association with such agency advisory bodies as the NIMB, RITCs, Headquarters Information

Management Coordinating Committee (HIMCC), Office Information Technology Coordinators (OITCs) and other groups, include resolving IT problems, and developing and implementing agency-wide IT policies and procedures. The CIO also provides for the efficient management of the agency's Wide Area Network (WAN) and headquarters Local Area Network (LAN); develops and maintains enterprise-wide and HQ databases and applications; ensures cost-effective long- and short-term planning and financial management of IT-related activities; administers the procurement, development or adaptation of new and emerging IT technologies, and assures the effective coordination of NOAA Fisheries IT/IM with those functions elsewhere in NOAA, DOC, and other Federal agencies and organizations.

The National Information Management Board (NIMB)

The National Information Management Board is the NOAA Fisheries' IT decision making body that establishes national information management policy, strategy and guidelines. The NIMB is made up of the deputy directors from each of the Regional Offices and Science Centers, the deputy director of HQ Office of Law Enforcement and a representative from the Office of Science and Technology. It is chaired by the CIO and has the responsibility to:

- Establish IT policy and strategy,
- Oversee enterprise-wide IT initiatives,
- Identify and assess regional, inter-regional, and national IT needs,
- Ensure equitable allocation of IT funds, and
- Establish strategy for new information technology

Regional Information Technology Coordinators (RITCs)

Each Regional Office and Science Center is responsible for managing its IT programs under the auspices of the CIO. RITCs serve as the focal point for IT and either coordinate or directly provide IT services to the regions. Services are provided in conjunction with the CIO's three Team Leaders

for Budget, Security and Helpdesk; Systems Applications and Infrastructure; and with the NOAA Fisheries IT Security Officer. Each RITC reports directly or indirectly to his/her respective NIMB member. Duties include coordinating IT hardware and software purchases at their sites, assisting in the development of the Enterprise Architecture, promoting its implementation into daily operations, coordinating WAN/LAN operations, and disseminating and/or collecting IT-related information throughout their respective Regional Offices and Science Centers.

Headquarters Information Management Coordinating Committee (HIMCC)

The HIMCC provides a forum for inter-office discussions and cooperation on information management issues at the NOAA Fisheries Headquarters (HQ) Offices. The HIMCC is chaired by the CIO and consists of representatives from each HQ office at the Deputy Director level. The committee addresses HQ IT related issues and actions including hardware and software maintenance, software development, LAN, office automation standards, training and support, development of Headquarters IT policies and strategies, identification and commitment of resources to address HQ IT requirements; and provides input on information technology strategic planning and architecture requirements.

Headquarters Office Information Technology Coordinators (OITCs)

The OITCs identify and implement HQ Office technical IT requirements and serve as the liaison between the Office of the CIO and their respective offices for collecting and disseminating information regarding IT activities and operations.

2.2.2 Monitoring Cost, Schedule and Performance

Cost – Several periodic budget reviews are conducted by the NIMB annually during face-to face NIMB meetings or by video-teleconference. A quorum of at least one NIMB member from each region is required according to the Boards terms of reference.

Schedule and Performance –Schedules for individual infrastructure projects such as the Wide Area network modernization, VPN, Certification and Accreditation, Laptop encryption are reviewed at the periodic NIMB meetings. Local projects and services such as helpdesk support and local software development support projects are reviewed regularly on the local level by regional IT review processes. Schedule reviews generally involve the project manager presenting the work breakdown structure and schedule in the form of an MS Project Gantt chart for review, comment and approval by the Board. In the Performance reviews, the Board reviews the project's target and actual performance metrics. If the project is significantly off track, the Board has the authority to restructure or even halt the project.

2.3 Reviews

NOAA IT investments are subject to formal review by the NOAA and Department of Commerce IT Review Boards. Also, planned and actual budget figures for investments are entered into eCPIC and updated as necessary as new information becomes available. These figures are periodically reviewed by the NOAA OCIO and DOC OCIO as part of their

regular capital planning and investment control business process and during the preparation and submittal of the Exhibit 53 and the Exhibit 300 for the DOC Consolidated IT Infrastructure.

Also, enterprise-wide and local technology refreshment and software acquisition and development projects are reviewed periodically, as necessary, by:

- The NIMB during face-to-face meetings and video-teleconferences.
- The RITCS during weekly teleconferences
- The OITC s during Monthly OITC Face-to-face meetings

2.4 Security

The Fisheries IT infrastructure components are certified and accredited according to OMB and DOC policy and based on NIST guidance. NOAA Fisheries certified and accredited a total of twelve systems in 2006 and plans to accredit its remaining seventeen systems in 2007. The complete certification package includes the system security plan, risk assessment, contingency plan and test, and an independent system test and evaluation. Management, operational, and technical security controls are documented and tested according to NIST 800-53 to ensure the confidentiality, integrity and availability of NOAA Fisheries information.

2.5 Performance Measures

The performance measures in Table 2 show the Fisheries IT Infrastructure’s performance with respect to Strategic and Business Results. Because the IT infrastructures supports all business areas, the business results performance metrics are the same as the customer results measures discussed in section 1. These measures align with the “Mission and Business Results Measurement Area,” “Processes and Activities Measurement Area” and the “Technology Measurement Area” of the Performance Reference Model developed by the FEA-PMO.

Table 2: Business Results Performance Measures

| Measurement Area | Indicator | 2005 Baseline | 2006 Actual Result | Comments |
|--------------------------------|--|------------------|------------------------------------|--|
| Strategic and Business Results | Number of overfished major stocks of fish | FY05 Actual:42 | FY06 Target: 42 FY06 Actual: 41 | Exceeded FY06 target (goal is to reduce number of stocks overfished) |
| | Number of major stocks with an “unknown status” | FY05 Actual:74 | FY06 Target: 71 FY06 Actual: 72 | Improved from FY05 level but fell short of FY06 target |
| | Number of protected species designated as threatened, endangered or depleted with a stable or increasing population levels | FY05 Actual: New | FY06 Target: 24 FY06 Actual: 24 | Met FY-06 target |

| Measurement Area | Indicator | 2005 Baseline | 2006 Actual Result | Comments |
|------------------|--|------------------|--------------------------------------|----------------------|
| | Number of stocks of protected species with adequate population assessments | FY05 Actual: New | FY06 Target: 59 FY06 Actual: 60 | Exceeded FY06 target |
| | Number of habitat acres restored | FY05 Actual: 25K | FY06 Target: 24K FY06 Actual: 32K | Exceeded FY06 target |

3.0 Financial Performance

3.1 Current Performance vs. Baseline

By far the largest component of NMFS annual IT infrastructure cost is agency personnel, which is \$21.8M or 77% of the total \$28.3M. Since these expenses are planned for by individual managers and paid for on a known budget, actual costs equal planned cost except in extenuated circumstances, such as unforeseen needs or unanticipated pay increases or decreases. None of these occurred in 2006, therefore the budget cost = actual costs for 77% of the total investment. Also in 2006, deviations of actual from budget cost for contracts, software and support services were minor resulting in very little overall differences between planned and actual cost for the total infrastructure investment.

Table 3: Fisheries IT Infrastructure Program Costs Actual vs. Budgeted Expenses

| Month | Cumulative in Millions | |
|---------------------------------|------------------------|-------------------|
| | Actual Expenses | Budgeted Expenses |
| Jan. | \$ 2.35 | \$ 2.32 |
| Feb. | \$ 4.71 | \$ 4.64 |
| Mar. | \$ 7.06 | \$ 6.96 |
| Apr. | \$ 9.42 | \$ 9.28 |
| May | \$ 11.77 | \$ 11.60 |
| Jun. | \$ 14.12 | \$ 13.92 |
| Jul. | \$ 16.48 | \$ 16.25 |
| Aug. | \$ 18.83 | \$ 18.57 |
| Sep. | \$ 21.19 | \$ 20.89 |
| Oct. | \$ 23.54 | \$ 23.21 |
| Nov. | \$ 25.90 | \$ 25.53 |
| Dec | \$ 28.25 | \$ 27.85 |
| Total Over run = \$ 0.40 (1.4%) | | |

3.2 Performance Measures

Financial performance of IT infrastructure projects are monitored regularly by the NIMB, RITCs, the OITCS and/or individual regional offices and labs during their face-to-face and teleconference

meetings. The reviews are led by managers of the individual projects. Baseline measures are established for Enterprise-wide projects at the beginning of the budget year as soon as appropriations are received and monitored from that point on. Any discrepancies, high or low, from the baseline are accounted for in the budget planning for the following year. In addition, any new infrastructure initiatives require an exhibit 300 and are reviewed by the NOAA and the Commerce IT Review Boards as necessary.

3.3 Cost Benefit Analysis

Cost benefits analyses are developed on a case-by-case basis and scaled to the scope of the particular infrastructure project. For project's requiring an exhibit 300, formal cost benefit analyses are prepared and reviewed by the NOAA IT Review Board and the Commerce IT Review Board as required. For large NMFS enterprise-wide projects that do not require Exhibit 300s, cost benefit analyses are developed by the project managers and reviewed by the NIMB and RITCs as appropriate. For local and small projects, scaled down cost benefit analyses are performed and reviewed by the RITC or other manager responsible for the investment.

3.4 Financial Performance Review

Infrastructure financial performance is typically subjected to a periodic review for reasonableness and cost efficiency. Regular budget reviews are held with the 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 baselined values. Any necessary corrective actions are also identified and implemented.

4.0 Innovation to Meet Future Customer Needs

In 2006, there were many small scale, innovative technology refreshment projects that took place to address future challenges, better meet customer needs, make better use of technology, and lower operating costs. Examples of some of the challenges and the projects undertaken include:

Need for increased bandwidth and storage – Fisheries' IT Infrastructure customers requested increased storage and bandwidth to accommodate new requirements such as GIS, data sharing, web applications, etc. The OCIO met the challenge by providing new SAN storage array technologies and telecommunication capabilities, such as multi -protocol layered switching (MPLS,) to keep up with increasing demands. NMFS MPLS was developed and deployed as an integral part of the comprehensive NOAANet communications system.

Need for fully secured laptops and PDAs - Protecting against the loss of PII and other security related information contained on removable media has been mandated for all Federal agencies. Fisheries responded to this concern through an extensive exercise to identify and encrypt all NMFS owned laptops and all laptops used for NMFS business, using a FIPS 140-2 compliant encryption software product. By the end of 2006, we attained 100% encryption of all NMFS owned or used laptops. A similar exercise has been initiated to encrypt all NMFS owned or used PDAs.

Need for comprehensive disaster recovery plans for computing platforms - The need for documented

plans to ensure the protection of mission critical and valuable information, as well as documented plans for the continued availability of IT resources to support ongoing agency operations has also been highlighted for all Federal agencies. Fisheries has met this challenge by assembling comprehensive Certification and Accreditation (C&A) Plans for each of its major operating systems and networks. Industry best practices and procedures were followed in developing these plans, which include the identification of potential security risks and the detailed plans to mitigate those risks.

Electronic Rulemaking – NMFS actively participated in achieving the visions of the President’s Management Agenda E-Rulemaking Initiative by planning to deploy the Federal Docket Management System (FDMS) throughout the NMFS enterprise. OCIO staff, working closely with NOAA and DOC, developed an application that along with new policies and business rules, streamlines the development and tracking of NMFS regulations. It also consolidates rulemaking systems and operational procedures within DOC and harmonizes Department information with OMB’s ROCIS system.

4.1 Number and Types of Users

The users of the IT infrastructure include approximately 4,364 NOAA Fisheries personnel, NOAA CORP Officers, contractors and collaborators. They require the full suite of secure IT infrastructure capabilities when and where they happen to be: on government sites, at local, national and international meetings, and at sea and other field locations.

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.

Some areas of potential consolidation and resource sharing include:

- Utilizing a DOC email system
- Participation in the new NOAA-wide contract to procure helpdesk services’
- Consolidation of Oracle licensing within NMFS