

NOAA OCIO Mission FY2015 – FY2018

To deliver information and technology services to enable NOAA's mission.

Vision

An efficient and advanced information enterprise that propels and protects NOAA's missions.

Goals

NOAA OCIO has established three organizational goals to be achieved by 2018. These goals demonstrate OCIO's vision for supporting NOAA's mission:

- GOAL**
1
- Advance the mission using innovative IT**
- 1.1 Enable NOAA's mission requirements with advanced IT solutions
 - 1.2 Enable the workforce to do their jobs more efficiently through collaboration tools and advanced technologies
 - 1.3 Increase visibility and accessibility to applications through mobile technology
- GOAL**
2
- Protect the Mission**
- 2.1 Establish a secure architecture to improve mission resiliency
 - 2.2 Improve the enterprise's response-readiness posture
 - 2.3 Deliver secure and standard technologies to enable reallocation of resources towards the mission
- GOAL**
3
- Achieve Excellence in IT Service Delivery**
- 3.1 Restructure the IT workforce to promote effective, customer-focused service delivery
 - 3.2 Serve as a provider of choice for technology-neutral enterprise IT service and infrastructure

GOAL

1

Advance the mission using innovative IT

- 1.1 Enable NOAA's mission requirements with advanced IT solutions
- 1.2 Enable the workforce to do their jobs more efficiently through collaboration tools and advanced technologies
- 1.3 Increase visibility and accessibility to applications through mobile technology

1.1 Enable NOAA's Mission Requirements with Advanced IT Solutions

Information is part of the foundation of NOAA's mission to "understand and predict changes in climate, weather, oceans, and information and knowledge with others". This information foundation is only becoming more critical as NOAA's reliance on computing capabilities and data generation grows. OCIO has taken great strides in information service delivery via services such as Help Desk, Dissemination, Network Optimization, and Cyber Security. OCIO actively identifies those services that have the greatest value to the enterprise and collaborates with users and technologists to incorporate new services into the delivery model.

The Governance and Portfolio Division has proposed six different initiatives which will support Goal 1.1:

- 1. Data Calls:** Manage data calls from the Federal CIO, OMB, DHS, and DOC. This will be tracked by ensuring 95% of data calls are completed within one week of the due date.
- 2. Risk Management:** Manage a structured framework to identify, assess, prioritize, mitigate, monitor, and coordinate NOAA OCIO risk management. Effective risk management will allow NOAA to identify and resolve risks before they can threaten the enterprise. The Enterprise IT Top Ten Risks will be submitted within 48 hours of due date as a tracking metric.
- 3. CPIC Control:** Manage and govern NOAA's IT Portfolio. Successful CPIC control will increase the return on investment of NOAA's IT investment. This will be tracked by submitting Exhibit 53 with less than 1% errors.
- 4. Freedom of Information Act (FOIA):** Manage and process NOAA FOIA requests in accordance with DOJ guidance. FOIA will provide citizen access to NOAA records, except to the extent that such records are protected from public disclosure. NOAA FOIA backlog will be maintained below 50 and no single request will be greater than 365 days old to ensure progress.
- 5. Privacy:** Process SORNs, PTAs, and PIAs. Privacy will protect information about individuals which NOAA may collect, disseminate, and/or store. This will be tracked by ensuring 95% of PTAs and PIAs are current.
- 6. Policy:** Manage NOAA's IT Governance documents. Policy ensures NOAA Enterprise IT governance documents are available to NOAA staff for use and implementation. 50% of governance documents will be current in order to maintain availability.

High Performance Computing and Communications has proposed 2 additional initiatives as an effort to support Goal 1.1:

- 1. Optimize HPC Solutions:** Develop an integrated software engineering team to enhance its software engineering discipline and expertise, maximize the efficiency of R2X, and enable effective collaborative model development with internal and external partners. With this optimization comes efficient application execution, preparation for HPC architectures, a more complex set of emerging programming standards, and a wider array of heterogeneous computing solutions. Methods for measuring these outcomes are by tracking the percentage of performance improvement year-over-year for specific model components, the number of modeling innovations introduced, the percentage of codes ported to fine-grain architectures in NOAA's model suite, the number of components shared across organizations, and/or the number of distinct architectures running NOAA codes.
- 2. Increase NOAA's Access to Leadership-Class Computing and Novel Architectures:** Use IAAs and existing agency programs such as DOE INCITE/ALCC/DD and NSF XSEDE to gain access to these resources. This will leverage engineering and resources that are not otherwise attainable and lead to breakthrough research via leadership classes. Both of these outcomes can be measured by the number of techniques developed at leadership agencies used in NOAA HPC as well as by the number of peer-reviewed papers published using leadership class computing systems.

Enterprise Architecture has proposed one initiative for Goal 1.1:

Improve EA Artifacts: Develop or refresh key EA artifacts needed to guide IT strategic investment planning and inform IT acquisitions. This will increase reuse of enterprise services and coordination among enterprise IT programs. Progress can be monitored by the completion two roadmap updates and mapping four PMEF value streams

1.2 Enable the Workforce to do Their Jobs More Efficiently through Collaboration Tools and Advanced Technologies

OCIO will support the information services workforce by focusing on skills, knowledge, and delivery of only the services required to support NOAA's mission in the most secure and cost-effective manner. The OCIO has been actively retiring costly and outdated in-house solutions by ensuring its workforce is acquiring and managing commercially available services. NOAA's investment in developing in-house critical skills ensures its intellectual capital is preserved, while providing meaningful work for its staff. Performance plans tie directly to the success of NOAA's mission by focusing on specific responsibilities and deliverables related to the effort. Support to staff will be provided in numerous ways such as certifications (e.g. ITIL, CMMI, HDI) and continued learning. NOAA's use of advanced technology and collaborative tools ensure the ability for NOAA's workforce to do their jobs efficiently and effectively

The Service Delivery Division has proposed one initiative for Goal 1.2:

IT Service Management: Acquire and operate a comprehensive ITSM platform (ServiceNow) to automate the business processes and workflows which underpin service brokerage and delivery. In doing so, cost drivers and pricing rationale will have increased transparency (by first establishing the rationale and documenting on per week until complete). This will also allow for agreements to be established in less time (target of 15 business days).

High Performance Computing and Communications has proposed one initiative for Goal 1.2 as well:

Outreach and Education about HPC Services: Provide outreach and education to communities within NOAA which have not traditionally used HPC; translate the complexities of using HPC environments involved with parallel programming, debugging, data movement, and storage. This will result in NOAA's traditional HPC user communities to leverage access to high-resolution model output. Numerous tracking methods can be used including: the number of new HPC projects allocated on NOAA HPC systems, the number of outreach sessions and classes held for new NOAA HPC users, the percentage of HPC User Committee requests satisfied within six months, and a cumulative number of HPC User Committee meetings held.

1.3 Increase Visibility and accessibility to Applications through Mobile Technology

GOAL **Protect the Mission**

2

- 2.1 Establish a secure architecture to improve mission resiliency
- 2.2 Improve the enterprise's response-readiness posture
- 2.3 Deliver secure and standard technologies to enable reallocation of resources towards the mission

2.1 Establish a Secure Architecture to Improve Mission Resiliency

Every day the relationship between climate, economics, and national security becomes more complex, making NOAA's mission to protect the nation's life and property even more critical. NOAA produces the most advanced data of current and future environmental risks through our satellites, ground stations, surveys, and models. The OCIO ensures these assets are readily available and reliable, while simultaneously protecting them through a secure architecture (e.g., security policies, standards, tools, and processes).

The Cyber Security division has proposed one initiative to support Goal 2.1:

Implement HSPD-12/IDM: Implement strong authentication using HSPD-12 Personal Identity Verification (PIV) Cards 100% across NOAA. Enhance and standardize identification and authentication across the federal

government. With this enhanced authentication comes greater single sign-on capabilities as well as improved management of privileged users (beginning by reducing privileged users by 10% and then monitoring the percentage of on-boarded systems with targeted privileged user monitoring).

2.2 Improve the Enterprise's Response-Readiness Posture

The OCIO follows important guiding principles in order to improve response-readiness. It aims to provide an always-available information posture, ensuring data and/or service is available as quickly as possible. The OCIO provides prioritized security and risk management for all NOAA assets. By prioritizing, OCIO can better meet the needs of the enterprise based on urgency. Reducing the complexity of the IT infrastructure (e.g., standardizing practices, processes, tools, and technologies) makes room for efficient, effective, and repeatable response-readiness.

The Homeland Security Program Office has proposed 3 initiatives as an effort to support Goal 2.2:

- 1. Infrastructure Upgrades at NOAA HQ COOP Site-C:** Enhance communications capabilities, resiliency, and readiness at NESCC for COOP operations. In order to fulfill this, a formalized written agreement must be executed. Following the agreement, acceptance testing of GSA Comms upgrades (Wi-Fi, Cell/Satphone) and validation testing of the COOP server will take place. Pending the Direct Bill Funding, acceptance testing of the emergency generator and HF radio would be beneficial as well.
- 2. NOAA Operations Center Upgrade:** Enhance monitoring and reporting capabilities at the NOAA Op Center through visualization and communications tools, standard operating procedures, staffing, and training. The upgraded center will bring about enhanced situational awareness and ability to keep NOAA leadership informed about incidents affecting NOAA's mission. In order to see this through fruition, the following should occur: SOP developed for monitoring NOAA-wide operations, five people (non-HSPO) trained to serve as SitUnit staff, NOAA Ops Center fully functioning as all-hazards incident monitoring, and functional exercise of NOAA Ops Center at Level I Activation.
- 3. PMEF Resiliency and Critical Infrastructure Protection:** Increase NOAA mission assurance by identifying and tracking mitigation of critical infrastructure vulnerabilities. This will allow for visualization of system interdependencies and shared vulnerabilities (dependent on on-going NOAA L/SO and non-NOAA partner collaboration). This will involve COOP planning scenarios being modeled by Q4 and the decision analysis tools integrating threat analysis and mission threat mapping to 10% by Q4. In order to track progress, the percentage of fully diagrammed mission threads relative to total PMEF missions threads will be as follows: Q1 (2%), Q2(4%), Q3 (6%), and Q4 (7%).

Enterprise Architecture has proposed one initiative for Goal 2.2:

EA/OCIO Process Integration: Document the CONOPS for OCIO organizational units to identify opportunities for more efficient and effective

delivery. Operationalize EA support for NOAA Link acquisitions. This will in turn create opportunity for effective integrations of improved OCIO business operations and standard architectural solutions for high-demand/high-impact acquisitions.

2.3 Deliver Secure and Standard Technologies to Enable Reallocation of Resources towards the Mission

With the advancement of internet and computers, come additional opportunities for cyber threats. Centralizing and standardizing our security environment enables NOAA to clearly segment its infrastructure and apply security measures appropriate for each of those segments. In order for NOAA to remain at the leading edge of information processing and communication, the OCIO will continue to identify, prioritize, and make use of the most advanced technologies available.

The Cyber Security Division has proposed two initiatives to support Goal 2.3:

- 1. SOC:** On-board all systems to SOC for continuous enterprise monitoring and situational awareness. CSD will monitor the percentage of systems engaged with the SOC onboarding process until 100% of the systems are on board. OCIO will also provide targeted monitoring on High Value Assets and PMEFs.
- 2. ECMO:** Deploy and use ECMO (IBM Endpoint Manager) for endpoint reporting and management; DOC is actively using ECMO to gather reports on the OU's and their compliance in patch management. OCIO will monitor the high impact system endpoints which have been deployed, with a goal that 100% of the end-points have Big-Fix deployed.

GOAL 3 Achieve Excellence in IT Service Delivery

- 3.1** Restructure the IT workforce to promote effective, customer-focused service delivery
- 3.2** Serve as a provider of choice for technology-neutral enterprise IT service and infrastructure

3.1 Restructure the IT Workforce to Promote Effective, Customer-Focused Service Delivery

Information delivery is the largest service that NOAA provides to the public. While the OCIO continues to serve as NOAA's knowledge integrator and information service broker, it continues to restructure its IT workforce in order to improve service delivery processes. The restructuring will rely on standardized processes and cooperation between Line and Staff offices. By sharing resources, the organization can optimize performance and reduce spending.

The Service Delivery Division has proposed one initiative to support Goal 3.1:

SDD Realignment: Optimize the organization and activities of existing personnel to support service brokerage and delivery. This will ultimately increase customer-base capacity. In order for this to occur, the following is required: inform SDD team members of team assignments by November FY16, establish clear roles and responsibilities by December FY16, and document, communicate, and assign responsibilities for the individual elements of the capability maturity roadmap by January FY17

The Resource Management Division has proposed 3 initiatives as an effort to support Goal 3.1:

- 1. CAPS Transition:** Convert from GS to CAPS. This transition will improve recruitment and the ability to offer a higher starting salary as well as increase retention with the option to award high performers with salary increases and bonuses.
- 2. Spend Plan Development and Execution:** Assess and improve spend plan development and execution. Consequently, stakeholders will have the budget information they need to manage execution. The OCIO will have 95% of funds obligated by the end of the year.
- 3. SLA Funds Tracking:** Assess and improve funds tracking for Service Level Agreements (SLAs). Improving tracking will allow stakeholders to have the budget information they need to manage the SLAs.

3.2 Serve as a Provider of Choice for Technology-Neutral Enterprise IT Service and Infrastructure

In order to continue as a provider of choice amongst IT service competitors, the OCIO enables a customer-focused workforce with improved system engineering, affordable security, and effective Portfolio management. By taking advantage of commercial economies of scale and scope (e.g., Cloud computing providers, Trusted Internet Connection Access Providers, Etc.), the OCIO could potentially reduce spending and therefore reduce cost to consumers.

The Service Delivery Division has proposed one initiative to support Goal 3.2:

Service Catalog: Establish a Service Catalog with service descriptions, service level objectives, hours of operation, pricing rationale, and process descriptions. This will ultimately lead to the release of the Enterprise IT Service Catalog v2.0. In order to track progress, one service description will be added to the catalog per week until initial target is reached and one combined process description, SLO, and pricing rationale will be added to the catalog per week until target is reached.

NOAALink Program Office has proposed 2 initiatives as an effort to support Goal 3.2:

- 1. NOAALink Customer Satisfaction:** Improve customer outreach and participation. Strengthen the NOAALink Program and the partnership with the Acquisitions and Grants Office (AGO). To improve the customer experience measures, annual, quarterly, and event surveys will be sent out and integrated customer requirement support will be provided. The integrated NOAALink team will also provide end-to-end PO and AGO process visibility for customers.
- 2. Development of Cost Effective, Enterprise-Wide IT Solutions:** Add Value to the OCIO community by identifying and documenting opportunities. Beginning with the identification and assessment of the viability and value of different opportunities, the IT shared services awards will be increased across NOAA and DOC. OCIO will also secure customer support (funding) in order to establish enterprise-wide solutions across NOAA and DOC.

The Enterprise Architecture Division has also proposed 2 additional initiatives to support Goal 3.2:

- 1. Operationalize EA Alignment Process:** Operationalize the EA alignment process as approved by the CIO Council to guide IT investment decisions. This will lead to IT investments that more effectively support NOAA strategy with increased use of enterprise services. Tracking metrics for this accomplishment include completing two pilot initiatives and a successful process implementation from five line offices.
- 2. Implement GITHUB:** Define NOAA's usage policies and governance model for GITHUB, operationalize NOAA's GITHUB instance, and establish a community of interest for GITHUB customers. Implementation will lead to improved agility of software development, code management, collaboration, and reuse. Tracking metrics include the update/creation of one policy and the reuse of 3 NOAA GITHUB.