National Oceanic and Atmospheric Administration (NOAA)

Office of Marine and Aviation Operations (OMAO)

2012 – 2016 OMAO Strategic Plan

March 23, 2012

Letter from the Director

As NOAA's operational component, OMAO supports a variety of missions and includes the NOAA Commissioned Corps, one of the Nation's seven uniformed services. Our roots trace back to 1807 when President Thomas Jefferson ordered the first comprehensive coastal surveys. These early surveys ensured safe passage of ship-born cargo for our growing Nation. The mission of OMAO has grown as well. Today we're the foundation for an expansive set of scientific research and operational objectives, as well as NOAA's emergency response capabilities. OMAO and the NOAA Corps support almost all of NOAA's missions – from hydrographic, ecosystems, and fisheries surveys to weather and atmospheric research. These critical missions help to protect lives and property and support billions of dollars in American commerce each year.

OMAO's ongoing challenge is to meet the growing demand for scientific data while providing the highest level of services. Budgetary constraints have intensified this challenge. As NOAA's fleet continues to age, maintenance costs steadily increase. Operational costs have increased as well, driven in part by rising fuel costs. All of us are working to address these challenges by increasing operating efficiencies and innovation while maintaining emphasis on safety. We are bringing new ships into operation, looking carefully at the lifecycle management of our fleet, and redesigning procedures for ship and aircraft allocation to achieve NOAA's mission and vision.

I believe we can weather these challenging times and look to the future with optimism. OMAO has increased the focus on developing strong partnerships with scientists, operational forecasters, the Nation's industry, research institutions, and other federal agencies. Collaboration is essential to find innovative ways to safely accomplish NOAA's missions. We also must invest in our people. Only this investment will enable us to improve our managerial and technical competencies as we deploy new technologies to meet NOAA's growing scientific and operational needs.

OMAO's strategic plan offers us a clear path forward over the next five years. This plan delivers a framework for measurable, incremental progress towards our long-term objectives while meeting our short-term needs. We have already begun several of these important initiatives. Continued progress will depend upon a sustained commitment from each of us. For OMAO to succeed, we must be dedicated to seeing this strategy become a reality. As always, thank you for your commitment to OMAO, NOAA, and the Nation.

Rear Admiral Jonathan W. Bailey
Director, NOAA Corps
Director, Office of Marine and Aviation Operations

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1. Executive Summary

OMAO plays a key role in supporting NOAA's Science and Technology Enterprise, Coastal, and Healthy Ocean goals and the associated objective of providing accurate and reliable data from sustained and integrated globally deployed scientific data collection and observation platforms. Towards these ends OMAO procures, operates, manages, and maintains research vessels and aircraft, provides diver certification training through the NOAA Dive Center, and provides safety training and standards for small boats. Each year, OMAO supports hydrographic surveys, fisheries surveys, and atmospheric, hydrologic, and climate research missions. In addition, during a normal hurricane season, OMAO pilots conduct "hurricane hunter" missions and the NOAA Corps is ready to support special operations in times of crisis, such as the Deepwater Horizon oil spill response. As the demand for science continues to grow, OMAO will likely need additional data collection and observation assets and innovative solutions to keep up with this growing demand.

Our long-term ***vision*** is to become:

"The Nation's trusted leader for innovative, adaptive, and reliable oceanic and atmospheric observation platforms."

Our ***mission*** is clear:

"Safely deliver effective Earth observation capabilities, integrate emerging technologies, and provide a specialized, flexible, and reliable team responsive to NOAA and the Nation."

As we approach the 100th anniversary of the NOAA Corps, we have set our sights high with five specific, long-term goals:

- Mission-Ready Assets
- Highly-Skilled, Adaptive, and Flexible Workforce
- Strong Partnerships
- Innovative Processes, Technologies, and Solutions
- Best-Value Stewardship of Resources and Investments

To achieve these long-term goals and reach towards our vision, we have outlined a set of short-, mid-, and long-term objectives as well as a detailed implementation plan focused on taking measured steps towards achieving them. The remainder of this document describes each of these objectives in detail and specifies how we will measure our progress and success. The implementation plan is contained in a separate document.

Grounded by our solid foundation of core values – **safety, customer focus and collaboration, integrity, reliability, innovation, and stewardship** – and our key governance process managed by our Executive Leadership Council (ELC), we are confident that we can achieve our bold vision and become the broker of choice for oceanic and atmospheric observational systems.

2. Strategy Map

We are committed to NOAA's success. Our strategy is directly aligned to NOAA's strategy outlined in the NOAA Next Generation Strategic Plan (NGSP). As indicated in Figure 1, our five-year strategy supports NOAA's Science and Technology Enterprise and the Accurate and Reliable Data from Sustained and Integrated Earth Observation Systems objective.

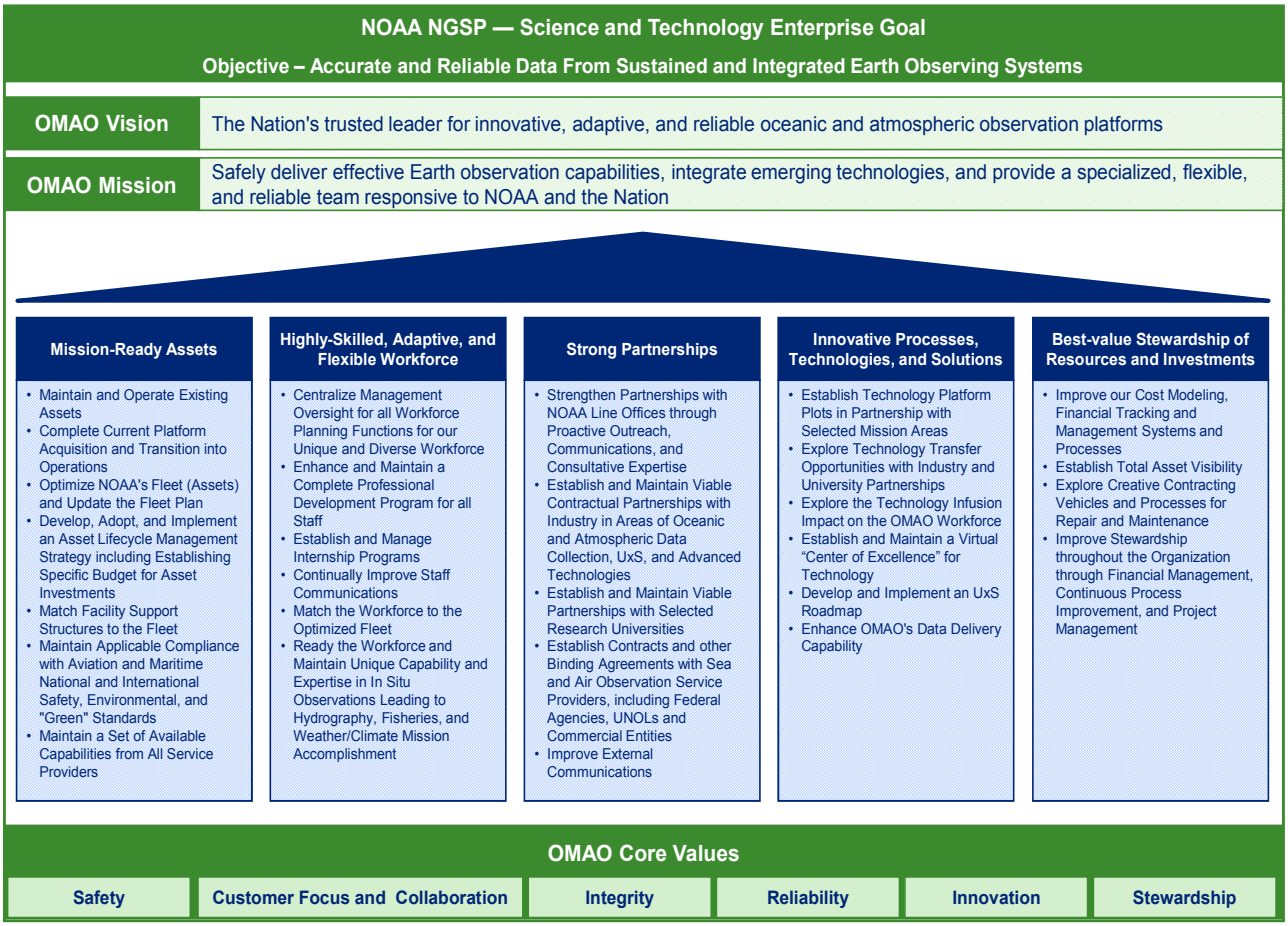


Figure 1: OMAO's Strategy Map in Support of NOAA's Science and Technology Enterprise Goal

When we achieve these goals, we will be the Nation's broker of choice to support oceanic and atmospheric observation systems.

Each component of our strategy is discussed in the following sections.

3. Vision, Mission, and Values

3.1 *Vision*

Our vision is to be ***"the Nation's trusted leader for innovative, adaptive, and reliable oceanic and atmospheric observation platforms".***

To achieve this vision we are employing an integrated strategy that:

- Leverages existing and new partnerships with our customers, observation service providers, and industry
- Invests in our people with training and innovative learning opportunities
- Evaluates and implements emerging technologies to more cost effectively and efficiently collect data
- Enhances our work practices

Each of these strategies is described here and is directed to achieving our five long-term outcome goals.

3.2 *Mission*

The mission of OMAO is to ***"safely deliver effective Earth observation capabilities, integrate emerging technologies, and provide a specialized, flexible, and reliable team responsive to NOAA and the Nation".***

To execute this mission, we procure, operate, manage, maintain, and properly dispose of a portfolio of assets, leverage new and emerging technologies, invest in personnel expertise, and proactively work with NOAA's scientists to understand their research and science requirements. We also maintain up-to-date standard operating procedures (SOPs) to ensure consistent best practices are employed for the safety of our people and compliance with applicable regulations and policies. In addition, we manage small boat safety and provide diving safety training and certification to ensure proper and safe execution. We are committed to providing best-value solutions to operational data collection challenges.

3.3 *Values*

OMAO places a premium on supporting the NOAA's Weather, Fisheries, Charting and Research missions. The following core values are embedded in our unique and diverse workforce in executing our mission.

- ***Safety*** – Conduct operations driven by safety, risk management and standards
- ***Customer Focus and Collaboration*** – Team with our customers to deliver exemplary mission support through understanding requirements, setting clear expectations, providing safe and efficient platforms and personnel, and offering dedicated customer service

- ***Integrity*** – Maintain integrity in everything we do – planning, engineering, operations and data management – to translate the need for scientific data and knowledge into successful operational data-gathering and timely delivery
- ***Reliability*** – Serve NOAA and the Nation as professionals with in-depth understanding of missions, science, and platform capabilities by providing the necessary personnel and assets to meet our customers' needs
- ***Innovation*** – Embrace challenges and ambiguity with a forward-thinking workforce, dynamic platforms, and evolving capabilities
- ***Stewardship*** – Maintain fiscal and process improvement discipline with a focus on stewardship of resources, efficiency, and sustainability

We put these values into practice every day to serve our customers worldwide.

A team from NOAA Ship Oscar Elton Sette *rescues a green sea turtle that had become entangled in a derelict fishing net.*

NOAA Corps officers aboard NOAA Ship Pisces *consult a nautical chart.*

4. Strategic Outcome Goals

4.1 *Mission-Ready Assets*

In order to support NOAA's strategic goals and objectives, OMAO is committed to providing a mission-ready fleet. Mission-ready means first understanding current and future requirements of the programs that OMAO supports. We factor into our planning each program's strategies and plans and develop strategic and operational plans to support them. We will be mission-ready by providing the right platform at the right time, right cost, and in the right place to support the scientific and operational mission – whether a large ship, aircraft, small boat or unmanned system (UxS). We take an Asset Lifecycle Management (ALM) approach to managing our fleet. We proactively plan repair time to meet mission requirements and ensure that our assets are in optimal condition. We use mathematical algorithms and predictive modeling techniques to plan acquisition, technology refresh, fleet re-capitalization, and asset retirement when the asset outlives its useful and productive life. Our ALM approach also means that we understand the true costs of operation so we can more effectively manage within our budget and take advantage of our partnerships to meet the mission with a best-value solution.

NOAA Ships Bell M. Shimada *(front) and* Pisces *are among the world's most advanced fisheries survey vessels.*

Mission-ready means that we provide vessels, aircraft and UxS that meet or exceed all safety and environmental standards and comply with regulations governing their operation. Web-based integrated software will help us manage the fleet inspection process by tracking deficiencies, developing and tracking of corrective action plans, and closing-out corrected deficiency items while saving time and reducing errors to maintain a mission-ready fleet at all times.

Mission-ready means ensuring that the data we collect gets to NOAA data centers efficiently and accurately, making it accessible to the public. Mission-ready means fully supporting diver safety through our diving safety programs and training. Mission-ready also means that our facilities and port support structures are cost effective, compliant with environmental standards, safe, and flexible to support changing mission requirements. Additionally, our mission-ready assets and platforms are staffed with the right resources and skills needed to support the scheduled research and operational missions.

4.2 *Highly-Skilled, Adaptive, and Flexible Workforce*

The experience, skills and "can-do" attitude of our employees are our greatest strengths. Our workforce collaborates with NOAA scientists helping to make science decisions, taking into account safety, efficiency, and accuracy. We seek to build on these strengths to take advantage of the exciting opportunities before us to support NOAA's mission in new, innovative, and cost-effective ways.

OMAO is committed to having a well-trained, mission-ready workforce. NOAA wage mariners deploy water sampling equipment from NOAA Ship Henry B. Bigelow *near the Deepwater Horizon wellhead.*

To be mission-ready, we must ensure that our workforce is prepared for the missions of today and tomorrow, including the dangerous missions that we are often called on to support. We are committed to having the best trained oceanic and atmospheric observation professionals to support NOAA's science and research mission. In addition to the training required to maintain licenses and certifications, we aim to develop continuing professional development plans for all levels of our workforce, from entry level to technician to master's level in the areas of hydrographic survey, fisheries survey, weather/climate field observations, and operational support. This includes a full complement of traditional training programs as well as cross-agency training, work exchanges, and industry learning opportunities. We manage the entire lifecycle from recruiting through transition/retirement using leading human capital practices, including workforce planning, series progression, individual development plans, and rotational assignments. OMAO engages the NOAA workforce management organization to create partnership opportunities.

Our workforce also deserves clear lines of communication – within OMAO, with our science customers, and with all of our partners. We work to continuously improve our internal and external communication strategies and methods to keep all of our key stakeholders informed and engaged.

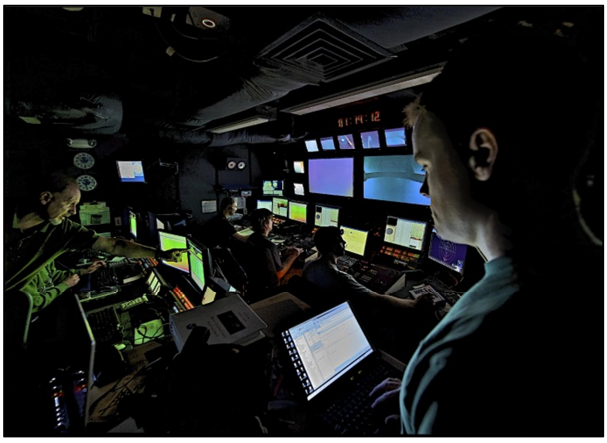
4.3 *Strong Partnerships*

Recognizing the tight fiscal environment for the foreseeable future, it is even more imperative that we accomplish our mission through partnerships. We have enjoyed the advantages of partnerships throughout our history – with the US Coast Guard, US Navy, and NASA – and we are active members and play a leadership role with Interagency Coordinating Committee for Airborne Geoscience Research and Applications (ICCAGRA) and the Interagency Working Group on Facilities and Infrastructure (IWG-FI). Establishing and maintaining strong partnerships is critical for our future. We research, solicit, and enter into agreements with industry, academia, and other federal agencies in order to meet NOAA's science mission. These partnerships help to further the adoption of innovation through test beds of new technologies and alternative strategies for data collection and observation. In addition, we have opportunities to leverage standard formats and create appropriate incentives for improving data

Science, operations, and partnerships come together at OMAO. The NOAA Marine Operations Center-Pacific and Oregon State University's Hatfield Marine Science Center in Newport, Oregon, are pictured here.

management to more effectively and efficiently achieve "Rolling Deck to Repository" or "R2R". Partnering with universities will provide advanced training in key engineering and science disciplines, helping to maintain and expand our technical competencies in field observations that connect directly to mission accomplishment in weather, fisheries, charting and research. Exchange programs with research labs, whether inside the federal government (e.g., Office of Naval Research) or with universities or foreign government observation agencies, keep new ideas flowing and challenge our staff to think differently about accomplishing the mission. Most importantly we must also partner with NOAA's Line Office scientists to proactively understand their current and future requirements. Working in partnership with science leaders provides additional perspectives that allow us to explore new means of getting the mission accomplished – such as using small platforms with specialized sensors as an alternative to NOAA ships and aircraft for in situ data collection. Maintaining and expanding our technical competencies in hydrographic survey, fisheries survey, and weather/climate field observations is an essential ingredient for partnering effectively and allows us to provide more mission support than any other ship or aircraft service provider. The partnering approach helps us optimize our fleet, manage our cost of service, and conduct lifecycle maintenance while meeting NOAA's priority research requirements. Partnering with our science customers means that we will take the time to jointly problem solve, share information, and educate new staff on how best to adapt technology. Our partner's success is our success.

4.4 *Innovative Processes, Technologies, and Solutions*



State-of-the-art technology aboard NOAA Ship Okeanos Explorer *makes it possible for scientists ashore to participate in expeditions at sea via telepresence.*

The pace of technology change has become increasingly faster, and correctly analyzing which trends will result in tomorrow's solutions for data collection and observation processes is critical to our organization. We are committed to keeping abreast of emerging observation, collection and information technologies, capitalizing on the technologies already on our platforms, and applying what we learn to more effectively support the scientific mission of NOAA. We establish and maintain partnerships with existing and emerging technology leaders including industry, academia, Department of Defense (DoD) and civilian government agencies. We actively participate in cross-industry forums and leverage proven technologies and lessons learned to support the NOAA missions. We seek opportunities to operate test-bed platforms and evaluate new technologies with our partners to enhance in situ observation. We establish and maintain partnerships and exchange programs with leaders in academia to bring their best thinking into our Research, Development, Test & Evaluation (RDT&E) programs. We actively participate in cross-industry forums and partner with other federal agencies to leverage their experimentation, processes and technologies to support the NOAA missions.

We also seek to take advantage of technology transfer opportunities from DoD and other federal agencies. We continuously review, revise and improve our data collection and observation processes in partnership with NOAA scientists to enable quicker integration of technology innovation into our missions. We also keep abreast of other emerging technology trends through our technology working group led by our Chief Technology Officer (CTO), determine their potential impact on our operations, and work towards integrating the most appropriate of these technologies to better serve our research customers. OMAO has invited NOAA partners to participate in the Technology Working Group, which uses a peer-review process to select initiatives that improve operational efficiency and effectiveness. We are developing a Concept of Operations (CONOPS) to more effectively plan for flexibility in using buoys, satellites, aircraft, and UxS that ensure and maximize interoperability between systems and platforms. We target technologies that can perform the mission more cost effectively over the long run even though there may be short-term start-up investments required.

Whether it's probing hurricanes like Katrina (seen here), charting our Nation's waters, or assessing marine resources, OMAO strives to provide high-quality, best-value service.

4.5 *Best-Value Stewardship of Resources and Investments*

As a federal agency we are constantly challenged to do more with less. Prudent use of taxpayers' money has always been warranted, but the current fiscal environment makes gaining efficiencies an imperative. OMAO is committed to providing the best-value solution to support NOAA's mission and our strategies for leveraging existing federal assets; partnerships and technologies are good first steps. In addition, we are committed to enhancing our ability to manage all the resources we have been given – extending the life of our fleet, using alternative data collection methods, and supporting the NOAA Diving and NOAA Small Boats Programs given prioritized requirements. There are several additional steps that we are undertaking to ensure that we continually practice sound stewardship.

First, we are improving our cost modeling, financial tracking and management systems and processes. This includes incorporating cost-efficiency criteria in the re-engineered Prioritization, Allocation, and Scheduling (PAS) process, performing cost analyses each fiscal year, examining CONOPS for utilization, efficiency, and manning, and improving transparency in the budget process. These actions enhance visibility and better inform decision making. Second, we are developing and adopting a full lifecycle management strategy to better manage our portfolio of assets – ships, aircraft, UxS, small boats, and facilities. This improves our ability to understand the trade-offs that are needed to balance mission priorities with an optimized asset base. Third, while incorporating proper controls, we delegate financial management and responsibility to the lowest appropriate levels to streamline decision making. To do this we invest in our staff and provide them with financial training and standards to enhance their financial stewardship. Fourth, we examine our maintenance contracts and optimize our arrangements for platform repair to get the highest quality service possible for the best value to the government. Fifth, we

are moving away from specific line item requests for each repair period and establishing a budget line for asset investments – fleet, aircraft, UxS, small vessels, and the NOAA Diving Center. Lastly, we are continually refining and improving our financial management and administrative processes.

5. Objectives

Goal 1: Mission-Ready Assets

Objective 1.1: Maintain and operate existing assets.

Maintain and operate all assets in accordance to annual budgets and approved allocation plans. Make sure annual maintenance, yard work, inspections, etc. are effectively managed and completed in a timely manner without interruption to the field season or set schedules each season.

Measures: Traditional measures such as asset utilization, Flight Hours (FH), Days At Sea (DAS), data quality, and conformance to safety standards will be used to directly measure this objective. In addition, in the short-term, evidence of progress will include tracking improved ship and aircraft readiness and conformance to repair schedules and costs. Over the next five years, progress will be signaled by increased ship and aircraft utilization rates and adoption of an ALM strategy which improves repair visibility and improves the quality of cost estimates.

Objective 1.2: Complete current platform acquisition and transition into operations.

OMAO aircraft, including the Gulfstream IV (front) and WP-3D, provide unmatched aerial observation capability.

To meet the research demand of the scientists and as a means of bringing in new, more sophisticated in situ observational platforms, the acquisition of *Reuben Lasker* and *Ferdinand R. Hassler* are nearing completion. We are planning their first missions as well as their long-term sustainment to provide a higher level of support to NOAA and the Nation.

Measures: We measure our success by Line Office or project mission success. In the short-term, key measures will include acquisition budget and schedule conformance. Once deployed, focus will shift to DAS and FH, utilization, mission success, data quality, and safety.

Objective 1.3: Optimize NOAA's fleet (assets) and update the Fleet Plan.

To optimize the size and type of assets in NOAA's fleet of ships and aircraft, a number of key steps are being taken. First, we are refining and documenting the PAS process in close collaboration with NOAA Line Offices. Second, we are working to establish baseline metrics. Third, we will conduct an analysis of the current NOAA small boat fleet and report information to NOAA leadership for a corporate understanding of these assets. Fourth, we will compare fleet

capabilities with mission profiles. Fifth, we will validate and update the Fleet Plan including efficiencies from using alternative data collection platforms, standardizing equipment across platforms (lowers costs and learning curves), verifying mission requirements, and incorporating optimization assumptions, lifecycle costs, maintenance costs, and technology impacts.

Measures: In the short-term, we will measure the achievement of this objective by the effective management and execution of OMAO's operating, repair, and maintenance budgets as well as the execution of Fleet Plan efforts for both aircraft and vessels. Additionally, we evaluate our success by the publication and implementation of the redesigned PAS process as well as working with all NOAA stakeholders to document and continually refine the requirements process. These actions will enable us to match our assets to the mission more effectively and efficiently in the long-term.

OMAO will adopt a new strategy for managing the lifecycle of ships, aircraft and other platforms. Pictured here is NOAA Ship Rainier *undergoing repairs in dry dock.*

Objective 1.4: Develop, adopt, and implement an asset lifecycle management strategy, including establishing specific budget for asset investments.

This objective helps us better manage our assets – vessels, small boats, aircraft, and UxS. Such portfolio analysis capabilities enable a more effective trade-off analysis to serve our customers. In addition, this objective helps us do a more effective job of determining the best-value solution for our customers (inclusive of the use of alternative service providers).

Building on the success of how OMAO manages its aircraft fleet and taking advantage of the realignment of marine operations in the Newport, OR facility, we are developing a full set of lifecycle management standards, processes, and capabilities to become better equipped to proactively manage fleet maintenance requirements and budget. We are targeting an Initial Operating Capability (IOC) to be achieved by the end of 2012. Full Operating Capability (FOC) will take longer to build capacity, implement the standards, and show meaningful results. FOC should be achieved by the end of FY13. To achieve this objective, vacancies need to be filled, process flows need to be developed, and new roles and responsibilities need to be clarified and documented. The new lifecycle management model will also have to be codified into an integrated set of SOPs.

A specific budget for asset investments provides greater visibility into the total costs for Major Repair Periods (MRPs) and Service Life Extensions (SLEs). Investments for all assets are managed this way – UxS, aircraft, small boats, ships, and diving technologies.

OMAO is committed to providing facilities appropriate for the needs of the ships they support. NOAA's Marine Operations Center-Atlantic is seen here.

Measures: In the long-term we will measure this objective by improved budgeting, enhanced spending efficiency, increased investment and approved re-capitalization and repair plans. Short-term measures include documented lifecycle management processes, utilization impact, and cost visibility.

We will measure progress towards this objective by developing and executing a plan of actions and milestones. Long-term measures include improved budget projections, greater visibility of true lifecycle costs, and approval of investment plans for maintenance, repair, and re-capitalization.

This objective is ultimately measured by a reduction in the total ownership costs of our assets.

Objective 1.5: Match facility support structures to the fleet.

We will periodically review facility needs for maintenance, safety, utilization, and overall cost management. Support structures must match the long-term fleet, aircraft, and UxS structure. Strategic analysis will be conducted to review homeport requirements, assess productivity, identify efficiency drivers, and determine optimal placement in concert with a major update to our strategy. We have targeted facilities management best practices that will be implemented in order to better manage total cost and as a possible means to leverage larger Blanket Purchase Agreement (BPA)-type service contracts.

Measures: In the short-term, we will measure this objective by a number of indicators including facility accident and safety measures, availability and reliability factors, workforce satisfaction measures, and approved facilities maintenance/upgrade budgets.

Over the next five years, progress will be signaled by a decreasing ratio of total facilities cost to total operations and maintenance costs as facility support structures are optimized to match the fleet.

Being mission-ready includes meeting or exceeding safety and environmental standards. At OMAO, safety and environmental stewardship are everyone's business, whether they work at sea, on land, or in the air. Pictured here: NOAA Ship Fairweather.

Objective 1.6: Maintain applicable compliance with aviation and maritime domestic and international safety, environmental, and "green" standards.

Mission-readiness must include vessels, small boats, UxS, and aircraft that are safe and approved to operate according to established standards. This safety focus must also extend to maintaining operational competencies in our personnel through targeted training and

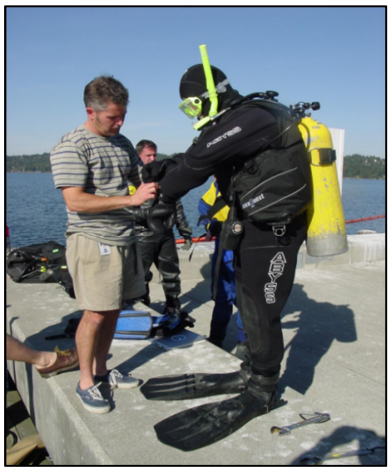
evaluation. A holistic Safety Management System (SMS) approach, supported by complementary tracking software, enables more effective management and drives the establishment of corrective actions to identified deficiencies. Becoming a leader as a "green fleet" is more of a challenge during the current economic environment. However, we will explore all avenues to use alternative fuels (e.g., biofuels) in our ships and possibly aircraft. For example, grants could be applied to purchase biofuels and prepare our ships for eventual use of the biofuels in the long-term.

Measures: We measure this by compliance checks for all assets which require compliance. Similarly we will track workforce compliance metrics related to certifications, training, and competency development. Over the next five years, we will also measure progress against this objective by decreasing trends in the number of safety violations and incidents. Specifically, we will work towards having no repeat discrepancies, first on the same vessel, then within the same class, then the same center, and finally fleet-wide. Lastly, we will use existing measures for compliance with "green" directives – for example, greater use of biofuels to run ships and increases in energy efficiency.

Objective 1.7: Maintain a set of available capabilities from all service providers.

Our role as a service provider to NOAA's scientists is to maintain a database of asset availability from all sources and develop the ability to schedule these assets based on prioritized requirements.

Measures: In the short-term, we measure this objective by the comprehensive composition and accuracy of service provider information maintained in a capabilities portal. Progressing towards the long-term, we will measure the percentage of missions supported by these alternative service providers, along with their respective mission success, customer satisfaction, and costs.



A mission-ready workforce is a skilled, well-trained and adaptive workforce. A diver gets ready at the NOAA Diving Center in Seattle.

Goal 2: Highly-Skilled, Adaptive, and Flexible Workforce

Objective 2.1: Centralize management oversight for all workforce planning functions for our unique and diverse workforce.

Linkage of workforce plans between the NOAA Corps, Wage Mariners, and Civilians creates opportunities for greater administrative synchronization, streamlines work flow, and improves decision making. The intent is to provide an end-to-end workforce lifecycle from recruiting, on-boarding, training, performance evaluation, ascension, and development through to transition (including termination and retirement). Initial requirements include completion of the Wage Mariner Workforce Plan and a NOAA Corps Workforce Plan that outlines progression requirements. Communication of these progression requirements will provide clarity and maximize the development of our talent. We will leverage all existing training tools (e.g., Leadership Competencies Development Program (LCDP), DOC Horizons,

Professional development keeps critical skills sharp and enables employees to advance their careers while ensuring the safe and efficient operation of OMAO platforms.

Commerce Learning Center (CLC), etc.) available within NOAA or from other agencies. This objective also supports our ability to analyze and forecast future workforce challenges. This objective also requires compliance with legislation guiding all workforces.

Measures: In the short-term, we will measure progress through completion of the NOAA Corps Wage Mariner, and Civilian Workforce Plans. Over the next five years, we will measure our progress on this objective on several fronts: time to fill vacancies, vacancy rates by vessel, percentage of recruiting targets for special skills (science and engineering) met, training hours, retention, and attrition.

Objective 2.2: Enhance and maintain a complete professional development program for all staff.

Our people are our most valuable asset. With advances in observation science, engineering, and technology, it is paramount that our staff keeps abreast of the latest developments. In addition, formalizing a professional development program enables our staff to advance their careers in new ways – cross-training on platforms and emerging technologies as well as developing new skills in the areas of finance, project management, process improvement, logistics, personnel management science, or engineering. In this way, our staff is becoming multi-skilled and enhancing our collective ability to meet customer requirements. Our staff maintains their professional certifications and gains new skills enhancing their flexibility and adaptability to future unknown requirements. We will examine performance incentives, awards, and other means to ensure that our unique and diverse workforce is recognized for the great work done each and every day in service to NOAA's science missions.

Measures: In the short-term, we will measure this objective in a variety of ways including participation rates, completion of Individual Development Plans (IDPs), promotion, attrition rates, percentage of cross-training, number of certifications (e.g., Project Management Professional (PMP)) and through classical training evaluation models (e.g., Analysis, Design, Development, Implementation, and Evaluation (ADDIE)). Over the next five years, progress will be signaled by the number of new competencies developed across the OMAO workforce.

Objective 2.3: Establish and manage internship programs.

Attracting talent through innovative internships is a key strategy to recruit the best and brightest into OMAO's unique and diverse workforce. Interns bring fresh ideas to address our observation, data collection, and management challenges. Universities with strengths in engineering, science, and technology areas can be targeted to establish internship programs which will provide a pipeline of skilled talent that addresses current and future needs. Partnerships with target universities can also assist our staff to pursue their advanced degrees in fields that we need. For example, there are special programs in UxS that may be attractive as NOAA's UxS strategy unfolds. Similarly, cooperative exchange programs with key partners or

best-in-class organizations can deliver mutual benefits while introducing new perspectives, competencies, and innovations.

Measures: In the short-term, this objective is measured by the quality of internship programs established, the number of interns participating, and the number of interns recruited. Over the next five years, progress will be signaled by the number of interns hired and retained by OMAO as well as survey results rating the quality of internship and cooperative exchange programs.

Objective 2.4: Continually improve staff communications.

Contractor Jason Sadler and ENS Jasmine Cousins label water samples collected aboard NOAA Ship Thomas Jefferson *during the Deepwater Horizon oil spill response.*

Employee surveys have suggested that there is room for improvement in all aspects of our communications across OMAO's workforce. The intent of this objective is to ensure that up and down the line, from field office to field office, from OMAO Headquarters (HQ) to the operations centers, from HQ to the field and within HQ, that timely decisions are made at appropriate levels and information flows smoothly, directly, and in a timely manner. We leverage those aspects of communication methods that make sense and adjust to better meet the needs of our workforce. For example, we support the use of social media (wikis, micro-blogs, etc.) and cloud computing if these make sense for an operations center, ship or aircraft.

Measures: In the short-term, a communications plan will be developed and implemented. Its utility will be measured in the quality, timeliness, and appropriateness of the communications up and down the chain of command within OMAO as well as between OMAO and the Line Offices, partners, and other key stakeholders through periodic surveys and feedback. Over the next five years, progress will be signaled by improving trends in workforce perception of internal communications as well as improved workforce articulation of OMAO's strategic direction and priorities.

Objective 2.5: Match the workforce to the optimized fleet.

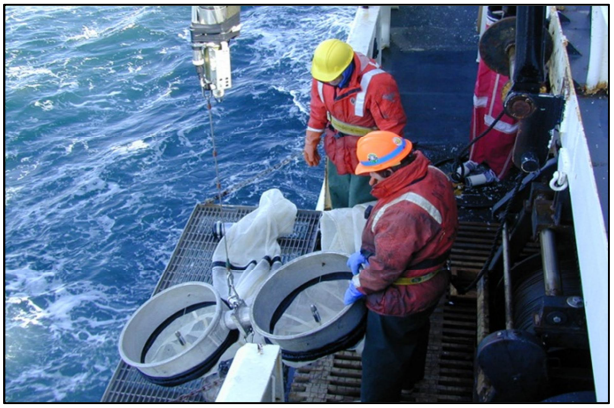
Mission-readiness cannot be truly achieved by fleet optimization alone. The number of staff to operate each vessel or aircraft in the fleet must be sufficient and qualified to execute the mission and provide some level of flexibility for a surge in requirements as well as emerging missions (e.g., disaster response operations such as that of the Deepwater Horizon oil spill). The right skill sets must be in place for all missions, both current and emerging, highlighting the importance of training and career development as key enablers towards workforce agility and customer responsiveness.

Measures: In the short-term, we will measure this objective by the number of Full-Time Equivalent (FTE) employees, retention, recruitment metrics, health and fitness indicators of the wage mariners, aviators, and the NOAA Corps, and competency level assessments. Over the next five years, progress will be signaled by decreased platform vacancy rates, decreased

accident and safety incidents, improved competencies, and improved workforce and customer satisfaction metrics.

Objective 2.6: Ready the workforce and maintain unique capability and expertise in in situ observations leading to hydrography, fisheries, and weather/climate mission accomplishment.

Fundamental to acquiring accurate and reliable in situ data are the data collection and observations platforms OMAO provides to NOAA's Line Offices. OMAO's unique and diverse workforce, which both supports the fleet and accompanies these platforms, serves as the invaluable bridge towards effective and efficient in situ observations. We strive to maintain our unique capabilities and expertise in a diverse set of missions – hydrographic survey, fisheries survey, and weather and climate observations – which requires us to work in close collaboration with NOAA's Line Office customers towards driving efficient and successful mission accomplishment.



OMAO will continue to work with NOAA Line Offices to determine the best platform option for achieving mission goals. Mariners on a NOAA ship retrieve special nets used in fisheries research.

Measures: In the short-term, this objective will be measured by customer satisfaction survey results around OMAO workforce preparedness and service. Over the next five years, progress will be signaled by an enhanced workforce competency profile as well as improved mission success ratings.

Goal 3: Strong Partnerships

Objective 3.1: Strengthen partnerships with NOAA Line Offices through proactive outreach, communications, and consultative expertise.

Delivering on the mission is of paramount importance. As the provider of choice, OMAO's role is to understand the requirements, determine available options and work in partnership with the principal investigators to develop the best-value, reliable data collection efforts for the operational weather and climate enterprise for the protection of life and property and improved decision support services solution. For example, by taking requirements to build multi-mission operations packages OMAO can help to improve operational efficiency. OMAO's role also includes maintaining operational safety. OMAO engineers and planners can work with NOAA Line Offices and mission scientists to determine alternatives for data collection when larger vessels are not available at the right time. For example, a small platform may be more cost effective than outsourcing for a charter vessel. A robust communications strategy is a key enabler to build and foster Line Office partnerships. Together, OMAO, Line and Staff Offices, and NOAA Leadership can work in partnership to manage external communications with key stakeholders, including making a stronger case to Congress for necessary resources to accomplish the science mission.

Measures: In the short-term, this objective is measured by customer satisfaction and mission outcome. Over the next five years, progress will be signaled by additional measures to include the establishment of the partnership agreements and the development of annual Service Level Agreements (SLAs), the number of missions accomplished satisfactorily, the utilization of small platform assets, and the cost of data collection. Long-term progress will also be characterized by joint engagement strategies with academia, NOAA, Department of Commerce (DoC), and Congressional leadership.

Objective 3.2: Establish and maintain viable partnerships with industry in areas of oceanic and atmospheric data collection, UxS, and advanced technologies.

This strategy is focused on working hand in hand with Line Offices and Principal Investigators (PI), as well as industry partners, to test some of their new technologies for data collection (e.g., sonars, sensors, etc.) on OMAO ships and aircraft, new "green" technologies to enhance operational efficiency and lower emissions, and innovation in new diving technology and research. The benefit to NOAA is early insight into emerging technologies, safer, non-mission impact trials of unproven technology, and quicker technology transfers. Sponsoring industry days and lecture series, where multiple vendors and organizations brief and showcase their technologies, running mini-training sessions, or previewing their research will offer additional benefits to NOAA, as our engineers and scientists are better informed and can plan for effectively integrating new technology into operations.

Partnerships with other federal agencies and universities foster innovation and new approaches for achieving mission goals. NOAA Ship Okeanos Explorer *(above) sails alongside the U.S. Coast Guard Cutter* Eagle*, which provided training to newly commissioned NOAA Corps officers.*

Measures: Short-term measures of success will include the initial documentation and archival of existing engagements and partnerships across OMAO. Moving forward, we will track letters of agreement and other partnership documentation, evaluations of the tests, and the transfer of new technologies. Over the next five years, progress will be signaled by improved contracting vehicle and pricing options for platform maintenance and re-capitalization. Long-term progress will also be characterized by improved engagement with Congressional leadership.

Objective 3.3: Establish and maintain viable partnerships with selected research universities.

Pairing OMAO engineers, NOAA Corps officers, and other scientists with research universities can provide professional development opportunities not normally available through traditional training. NASA and other federal agencies have established formal relationships with institutions that provide their investigators the opportunity to test ideas, learn from others, and infuse innovative thinking into their operations. Similarly, OMAO can leverage the long-term collaborative capabilities of the NOAA Cooperative Institutes.

Measures: This objective is measured in the short-term by the establishment of the partnership agreements, the number of participating OMAO staff, and documented meeting notes in new technologies and processes. Long-term measures could include both qualitative gains such as an increase in peer-reviewed papers as well as quantitative impacts such as cost savings and efficiency gains achieved as a result of partnerships.

Objective 3.4: **Establish contracts and other binding agreements with sea and air observation service providers, including federal agencies, the University-National Oceanographic Laboratory System (UNOLS), and commercial entities.**

OMAO is leveraging partnerships with other federal agencies to enhance employee skills and expand mission capabilities. NOAA Corps officer CDR Phil Hall is pictured here with the unmanned NASA Global Hawk aircraft, which he learned to operate while on assignment to the NASA Dryden Flight Research Center.

NOAA has enjoyed the services of commercial vessels as well as university-owned assets to carry out research missions. There is significant opportunity to more centrally manage these relationships to increase service quality and possibly reduce per mission cost through new contractual relationships. OMAO will work to establish and maintain a database of capabilities in order to find the best-value solution for the mission. In some cases this will be outsourced for more routine missions or missions that can't be met by OMAO assets as a result of the fleet allocation plan and requirements prioritization.

Our role is to develop and maintain strong relationships with alternative service providers, understand their research capabilities and operational capacity, and help to select the best of breed solution to meet science mission requirements. In addition, our role is to identify which common or routine missions might be better suited for using non-OMAO assets and which missions require OMAO's expertise. Joint missions can help to subsidize costs, and bringing in partners can extend DAS and deliver more value per dollar spent.

Measures: This objective is measured in the short-term by the number of missions accomplished by non-NOAA providers, customer satisfaction and mission success. Costs of outsourced missions are also a measure. In the next five years, progress will be signaled by the number of Memorandum of Understandings (MOUs), SLAs, and contracts in place versus the percentage of in situ observations conducted by OMAO, and the percentage of work done in-house versus work out-sourced.

Objective 3.5: Improve external communications.

OMAO is dedicated to providing the best-value solutions to meet our customer's mission objectives and requirements. The experience, skills and "can-do" attitude of our workforce are our greatest strengths. We are committed towards leveraging these strengths to take advantage of the exciting opportunities before us to support NOAA's mission in new, innovative, and cost-effective ways.

Critical to this pursuit is building and enhancing a marketing and public relations strategy that showcases this dedication and expertise in proactively advertising OMAO's core capabilities and

value to NOAA and the Nation. We will work collaboratively with NOAA Line Offices to promote and advocate to Congress, the Office of Management and Budget (OMB), and other stakeholders the role NOAA and OMAO plays for enhancing understanding of our planet and for protecting life, property, and commerce.

Measures: In the short-term we will measure this objective by number and scope of external communications. Over the next five years, progress will be signaled by the breadth of OMAO's external communications portfolio, particularly focusing on folding in technology and social media. Long-term progress will also include improved Congressional and public awareness.

Goal 4: Innovative Processes, Technologies, and Solutions

Objective 4.1: Establish technology platform pilots in partnership with selected mission areas.

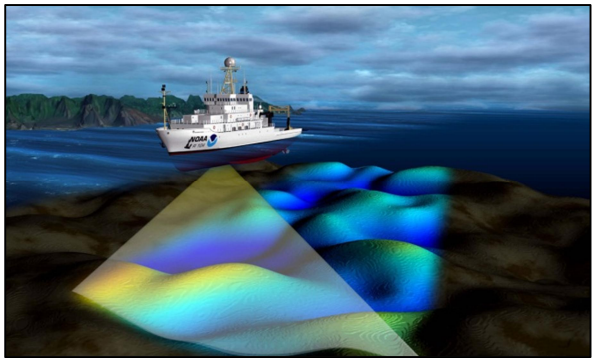
In collaboration with mission areas (e.g., stock assessments and charting) and building on past successful collaborative efforts, OMAO will help to test alternative data collection technologies, evaluate their effectiveness, incorporate findings into the Fleet Plans, and retire assets and systems that do not work or are less efficient or effective. These test beds should not impede the achievement of mission requirements, but rather should be included in the planning and allocation of the OMAO fleet. OMAO will focus its efforts to make the most out of existing technology and partner with NOAA research organizations to transition innovation to operations in support of the mission.

Measures: In the short-term, this will be measured by the number of successful transitions of the tests into operation, changes in how the mission is executed, mission success measures, costs, and other fleet metrics. Over the next five years, progress will be signaled by infusion of new technology solutions into the OMAO fleet as well as improved trends in customer survey results.

Objective 4.2: Explore technology transfer opportunities with industry and university partnerships.

As part of the targeted technology test-bed strategy, leverage complementary efforts underway or planned through a technology working group peer-review process (facilitated by OMAO) to bring new technologies into the test bed to evaluate potential application to conducting the mission. As part of this objective, OMAO seeks opportunities for interoperability of all assets to maximize the platform capabilities that are emerging.

As DoD missions get scaled down, there is an opportunity to transfer assets from the war-fighting mission to support NOAA's science missions. Using an ALM approach, OMAO will be able to make informed decisions on whether to bring on these available assets.



OMAO seeks to use both proven technologies like multibeam sonar, depicted here, and new technologies to accomplish its mission.

Measures: In the short-term, this objective will be measured by the number of joint-experimentations on the target test-bed vessels, their success and lessons learned, and changes in routine mission. Over time, other measures may include an indicator of multiple missions being executed by a single vessel – whether ship, aircraft or UxS. This objective is ultimately measured by the number and value of technology transfers, the cost of re-purposing the asset, and increased availability of assets to support the mission. Additionally, customer satisfaction and mission effectiveness can be useful indicators of long-term success.

Objective 4.3: Examine the technology infusion impact on the OMAO workforce.

Establish workforce competencies required for new technologies, identify existing workforce competencies, determine gaps, and establish a workforce development plan. This objective requires cross-training with industry, other federal agencies, and possibly academia partners.

Measures: In the short-term, this will be measured by the completion of a workforce competency assessment and corresponding training plan. Over the next five years, this progress will be measured by mission success (based on a competent workforce) and customer satisfaction.

Objective 4.4: Establish and maintain a virtual "center of excellence" for technology.

New technologies often require new skills for those who operate them. OMAO will ensure that employees receive the training they need to launch and operate new technologies safely and effectively. Pictured here is an autonomous underwater vehicle (AUV) being deployed from NOAA Ship Nancy Foster.

NOAA has a long history of deploying advanced observational technologies. OMAO has been and needs to continue to be a strong partner with the Line Offices, other federal agencies, and industry to figure out how to best meet their needs, explore innovation, test technologies and demonstrate innovation. OMAO will work across these centers of expertise, re-kindle the technology working group, and work to facilitate innovative technology solutions on OMAO operated platforms that can result in operational efficiencies and/or enhanced capabilities. The imperative is preparing now for the incorporation of emerging technologies to perform the mission more efficiently and cost effectively.

Measures: This objective is measured in the short-term by its initial operating capability, funding, and the development of an advanced concept technology process. In the long-term, this will be measured by the percentage of missions conducted using new, alternative technologies and processes, mission success, and customer satisfaction. An important additional measure is the number of articles and other public relation indicators discussing successful technology infusion, mission success, and cost saving.

Objective 4.5: Develop and implement an UxS roadmap.

UxS are advancing every day. Multiple federal agencies are engaged in research and testing to develop advanced UxS technologies and capabilities. NOAA has a number of UxS already in operation. An ALM approach will help to frame a purposeful and well-developed strategy around procurement, management, operations, and maintenance of these platforms. This perspective will also help to identify how ship launch and recovery capability can best be leveraged as a "force multiplier" in collecting data in the most cost-efficient manner. OMAO will work collaboratively with Line Offices as well as other federal partners to help to chart the best course forward for the use of UxS across NOAA.

OMAO sees unmanned systems as important, force-multiplying observation tools. Pictured here is an UxS being launched from NOAA Ship Oscar Dyson.

Measures: This objective will initially be measured by the adoption of the roadmap and strategy, its level of funding, and mission success measures. Customer success, lower mission costs, and safety are long-term measures of success.

Objective 4.6: Enhance OMAO's data delivery capability.

OMAO will develop and maintain a data delivery capability that complies with NOAA Environmental Data Management Committee (EDMC) guidance as well as the NOAA Observing Systems Council (NOSC) data integrity and data management direction. The role of data manager will be defined and assigned, a data management policy will be created and data management plans implemented to address the entire data lifecycle for OMAO platforms. The overall objectives are for Integrated Ocean Observing System (IOOS) partners to develop and maintain Data Management and Communications (DMAC) capabilities to:

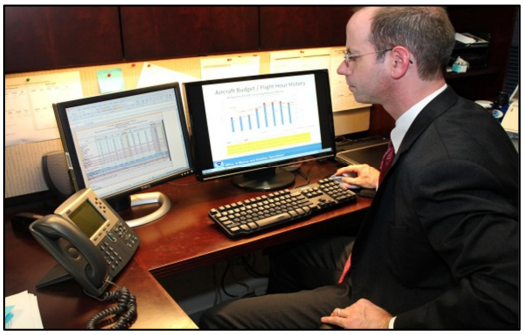
- Deliver accurate and timely ocean observations and model outputs to a range of consumers including government, academia, private sector users, and the general public utilizing specifications common across all providers.
- Deploy the information system components (including infrastructure and relevant personnel) for full lifecycle management of observations from collection to product creation to public delivery, system documentation, and archiving.
- Establish robust data exchange that is responsive to variable customer requirements and routine feedback and not tightly bound to a specific application of the data or particular end-user decision support tool.

OMAO also collects, stores, and archives large data sets on science missions and delivers the data to NOAA customers in accordance with project instructions; a subset of data is archived and delivered to NOAA data centers and the National Archives and made available to researchers for new areas of inquiry. These data sets are accessible to anyone within OMAO,

NOAA, other government agencies, academia, or private enterprise. Findings are shared as they become relevant or present an interesting opportunity.

Measures: This objective will be measured by compliance with the EDMC guidance, data quality measures, and usage of the archived datasets.

Goal 5: Best-Value Stewardship of Resources and Investments



OMAO is committed to ensuring best-value stewardship of resources and improving cost management.

Objective 5.1: Improve our cost modeling, financial tracking and management systems and processes.

We leverage leading industry practices, take advantage of NOAA developed tools, and continuously improve how we manage our resources. This objective ensures that cost-efficiency information is transparent and incorporated into the fleet allocation process. Cost analyses are performed each year to enhance our budgeting process. CONOPS and customer requirements are continually revisited, focusing on utilization, efficiency and manning considerations. As an example, these actions can assist with requests for platform support in the out-year budget requests where impacts of not sailing can be compared to the nominal cost of a day at sea or flight hours.

Measures: In the short-term, we will measure this objective by improvements in financial tracking visibility and reporting. We will also measure fuel reduction achieved from optimizing speed and ship operation. We measure this objective in the long-term by cost modeling accuracy and prediction, as well as granularity of the budget information.

Objective 5.2: Establish total asset visibility.

Critical towards developing ALM is the capability to accurately assess, consolidate, and provide timely and accurate information on asset location, quantity, condition, movement, and status. This visibility will enhance decision making throughout the logistics pipeline by working to streamline maintenance cycles, inventory levels, spares, and transportation.

Measures: In the short-term, we will measure this objective by the overall availability of complete and accurate asset data within our information systems. Over the next five years, progress will be signaled by increased transparency of assets within budgets.

Objective 5.3: Explore optimized contracting vehicles and processes for repair and maintenance.

To obtain the best-value repair and maintenance services as well as the best-value alternative observation services from commercial partners, contractual arrangements should be analyzed on a regular basis through strong collaboration with the NOAA Acquisition and Grants Office (AGO). In addition, today there is a long chain of approvals and data entry that can impede contractual actions. A review could result in a more efficient process and potentially fewer contracts with more efficient purchasing arrangements (e.g., BPAs, Indefinite

Delivery/Indefinite Quantity (IDIQs), etc.) to provide quick access to these services to meet mission requirements. Other enablers required for this objective are enhanced acquisition and contracting capabilities.

OMAO is committed to providing best-value solutions to meet mission requirements. Ferdinand R. Hassler*, seen here, is NOAA's new, state-of-the-art coastal mapping vessel.*

Measures: In the short-term, the measures of success include the time from request for procurement is received until the purchase order or contract is issued, the number of updated and revised contracts, the dollar amount of the contracts utilizing these arrangements, mean time to repair, and adherence to service level agreements. Long-term progress will be signaled by a reduction in contract volume and reduced maintenance costs per DAS and FH.

Objective 5.4: Improve stewardship throughout the organization through financial management, continuous process improvement, and project management.

OMAO is committed to developing financial management, continuous process improvement, and project management capabilities throughout its organization. We will identify and build out the requisite processes, tools, and training opportunities necessary to instill knowledge and awareness of and foster application of these disciplines in working to more efficiently and effectively deliver on OMAO's mission.

Aside from the positive impacts on our ability to achieve our mission, this pursuit will also improve employee morale, broaden workforce competencies, and create greater confidence in OMAO as an organization from our customers, leadership and partners.

Wherever practical, financial management should be delegated to the lowest level to enable more effective decision making and a more streamlined process. This means that field offices and operations centers should be able to make decisions within their realm of responsibility. To achieve this objective, financial management training needs to be developed and delivered to the staff with such responsibility. Standards have been established along with proper controls to ensure that financial actions are made prudently in accordance to generally accepted practices and in compliance with all laws, regulations, and policies.

Measures: The success of this objective in the short-term is publication and communication of updated policies and procedures, course attendance, performance evaluations, and employee certifications in Business Process Re-engineering (BPR), Lean Six Sigma (LSS), project management, and other professional courses. In the long-term, progress will be signaled by an enhanced workforce competency profile as well as improved balance in workforce responsibilities and authorities in project and financial management.

6. Management and Implementation of Our Strategic Plan

6.1 *Turning Strategy into Action*

At the outset of our strategic planning effort, we were cognizant of the data that suggests that most strategic plans fail during implementation. Typically less than 10% of the workforce understands the strategy and their role in its execution, managers' performance is not linked to strategy, and executives tend to spend less than one hour per month on strategy execution. We have proactively taken and will continue to take steps to address the issues of communication, performance, and governance.

6.2 *Communication*

As an addendum to this strategic plan, we have developed a communication plan that is built around each key stakeholder group. Based on lessons learned from surveys we have already conducted in 2011 and based on industry leading practices, this communication plan is focused and actionable. For starters, we will have the strategic plan posted to our website, making it available to all stakeholders – internally and externally. We will post the implementation plan on our OMAO website for our internal staff so they can see exactly how we are doing against our milestones. In addition, we will provide periodic updates using a variety of media, including webcasts, videos, email alerts, and town halls. We will provide every opportunity for our workforce to engage in an active dialogue about the strategy and our progress (or lack thereof). We will keep our Line Office customers and partners abreast on progress, issues, and changes as we execute and offer question and answer sessions as needed to ensure that we bring their voice into the execution process. We will leverage standing committees internal and external to NOAA – Fleet Council, ICCAGRA, etc. – to also keep our stakeholders informed and engaged. Lastly, we will update our communications plan at least annually when we revisit our strategic plan to make sure we are in lockstep.

6.3 *Performance*

Working within the constructs of NOAA's annual budgeting and performance management processes, OMAO has already directly tied our Annual Operating Plan (AOP) to our strategy. Our strategic plan and the prioritized initiatives we undertake to execute the plan will drive each year's AOP. We will continually review and examine all initiatives and projects on the books or currently underway for alignment to the strategic plan as well as to NOAA's strategic goals and objectives (as these may change). The AOP will drive performance plan information for OMAO leadership and managers. Managers in turn will cascade execution responsibilities to the members of their team and report on their performance. We will be held accountable to our performance outlined at every level to incentivize execution against our plan.

6.4 *Governance*

OMAO's ELC will manage and monitor the execution of the strategic plan through our implementation plan. We have established the following key roles to clarify responsibilities for execution and reporting:

- Goal Champion – Accountable for making progress towards our long-term outcome goal; provides oversight and guidance to Objective Leads and supports Project Managers as needed
- Objective Lead – Accountable and responsible for hitting all objective milestones; sets and refines objective measures, provides guidance to Project Managers, and keeps the ELC informed of progress, issues, and risks
- Project Manager – Responsible for the execution of a priority initiative from initial charter and budgeting to project close-out (as required); organizes and coordinates resources and SMEs needed to execute and provides periodic updates to the Objective Lead, Goal Champion, the ELC, or other interested parties within NOAA
- Deputy Project Manager – Acts as primary back-up to the Project Manager with similar roles and responsibilities; as such, serves as a "safety net" to make sure progress is maintained
- Subject Matter Experts (SMEs) – Provides support to Project Managers as needed throughout the life of a priority initiative

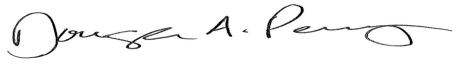
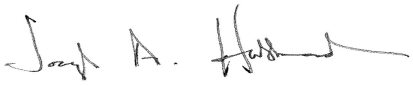
The ELC will conduct a formal quarterly review of each key initiative, progress against plans, address communication issues from the field, and provide guidance as needed to keep the plan on track. The ELC will also address "out of cycle" issues as they may arise during weekly ELC calls for quick and effective action or resolution. On an annual basis, the ELC will revisit the progress made on our priority projects in conjunction with annual guidance from NOAA, current and projected budgets, and other priorities. We will course-correct based on our progress and these important current environmental factors.

6.5 *Management*

Our strategy implementation plan will be managed using the Project Management Institute's Project Management Body of Knowledge (PMBOK)-based project management techniques, methods, and protocols. In addition, we will leverage the RASI (responsible, approval authority/accountable, supports, and inform) technique to clarify roles and responsibilities for everyone involved in a priority project/initiative. Wherever possible, we will leverage leading visualization and dashboarding technologies to enable more effective decision making and enhance execution communication.

7. Appendix

7.1 *ELC Member Signatures*

Name	Position	Signature
RADM Jonathan W. Bailey	Director, NOAA Corps and Director, Office of Marine and Aviation Operations	
RDML Michael S. Devany	Director, Marine and Aviation Operations Centers	
David T. Moroney	Deputy Director, Office of Marine and Aviation Operations	
CAPT David A. Score	Commanding Officer, Marine Operations Center-Atlantic	
CAPT William B. Kearse	External Affairs	
CAPT Wade J. Blake	Commanding Officer, Marine Operations Center-Pacific	
CAPT Randy J. TeBeest	Commanding Officer, Aircraft Operations Center	
CAPT Anne K. Lynch	Director, Commissioned Personnel Center	
Stephen H. Manzo (CAPT, Ret)	Director, Marine Operations Center	
John E. Potts	Chief Financial Officer	
Douglas A. Perry	Chief Information Officer	
CDR Debora R. Barr	Chief (Acting-Select), Safety and Environmental Compliance Division	
Joseph A. Hubbard	Chief (Acting), Platforms Acquisition Division	

7.2 *Acronyms*

Acronym	Full Name
AGO	Acquisition and Grants Office
ADDIE	Analysis, Design, Development, Implementation, and Evaluation
AOP	Annual Operating Plan
ALM	Asset Lifecycle Management
BPA	Blanket Purchase Agreement
BPR	Business Process Re-engineering
CAO	Chief Administrative Officer
CLC	Commerce Learning Center
CONOPS	Concept of Operations
CTO	Chief Technology Officer
DAS	Days At Sea
DMAC	Data Management and Communications
DoC	Department of Commerce
DoD	Department of Defense
EDMC	Environmental Data Management Committee
ELC	Executive Leadership Council
FH	Flight Hours
FOC	Full Operating Capability
FTE	Full-Time Equivalent
HQ	Headquarters
ICCAGRA	Interagency Coordinating Committee for Airborne Geoscience Research and Applications
IDIQ	Indefinite Delivery/Indefinite Quantity
IDP	Individual Development Plan
IOC	Initial Operating Capability
IOOS	Integrated Ocean Observing System

Acronym	Full Name
IWG-FI	Interagency Working Group on Facilities and Infrastructure
LCDP	Leadership Competencies Development Program
LSS	Lean Six Sigma
MRP	Major Repair Period
MOU	Memorandum of Understanding
NASA	National Aeronautics and Space Administration
NGSP	NOAA Next Generation Strategic Plan
NOAA	National Oceanic and Atmospheric Administration
OMB	Office of Management and Budget
OMAO	Office of Marine and Aviation Operations
PAS	Prioritization, Allocation, & Scheduling
PI	Principal Investigator
PMBOK	Project Management Book of Knowledge
PMP	Project Management Professional
R2R	Rolling Deck to Repository
RDT&E	Research, Development, Test, & Evaluation
SMS	Safety Management System
SLA	Service Level Agreement
SLE	Service Life Extension
SOP	Standard Operating Procedure
UNOLS	University-National Oceanographic Laboratory System
UxS	Unmanned Systems

7.3 *References*

For further information and background on NOAA's Office of Marine and Aviation Operations, please visit OMAO's website.

http://www.omao.noaa.gov

For further information and background on the National Oceanic and Atmospheric Administration's Next Generation Strategic Plan, please visit NOAA's website.

www.noaa.gov/ngsp

7.5 *Photo Credits*

Pg. 7 (left): Ernesto Vazquez/SWFSC

Pg. 7 (right): NOAA

Pg. 8: NOAA

Pg. 9 (top): Elizabeth Crapo/NOAA

Pg. 9 (bottom): USCG

Pg. 10: Carl VerPlanck/NOAA

Pg. 11: NOAA

Pg. 12: NOAA

Pg. 13: LT Timothy Smith/NOAA

Pg. 14 (top): NOAA

Pg. 14 (bottom): NOAA

Pg. 15: NOAA

Pg. 16: NOAA

Pg. 17: Elizabeth Crapo/NOAA

Pg. 18: NOAA

Pg. 19: Colleen Peters/NOAA

Pg. 20: NASA

Pg. 21: NOAA

Pg. 22: NOAA

Pg. 23: Josh London/AKFSC/NOAA Fisheries Service

Pg. 24: NOAA

Pg. 25: NOAA

7.6 *Acknowledgements*

The 2012–2016 OMAO Strategic Plan reflects the culmination of the comprehensive feedback received from across the unique and diverse workforce of OMAO as well as from its valued stakeholders, including the NOAA Line Offices and UNOLS. We'd like to sincerely thank all involved for the wealth of their contributions and perspectives and, most importantly, their dedicated partnership in helping to chart OMAO's future.