The objective of “Sea Power 21” is to ensure that we possess credible combat capability on scene to promote regional stability, to deter aggression throughout the world, to assure access of Joint forces, and to fight and win should deterrence fail. Ensuring that this objective is met, and that emerging naval warfare concepts—Sea Strike, Sea Shield, and Sea Basing—for the 21st century are supported, is a complex, iterative, ongoing process that requires priorities be examined rigorously. The Chief of Naval Operations’ top five priorities, which continue to guide our key decisions, are:

- Manpower
- Current Readiness
- Future Readiness
- Quality of Service
- Organizational Alignment

The CNO’s annual Guidance and the prioritized Capability Objectives provide the links between vision and strategy, on the one hand, and the Independent Capability Analysis and Assessment (ICAA) and the CNO’s Investment Strategy Options (ISO), on the other. Associated with this is the Naval Capabilities Development Process (NCDP), which places decisions within a capability-focused context. An important element in addressing new naval operating concepts—such as the Fleet Response Plan—and the technologies, systems, and platforms needed to carry out future roles, missions, and tasks, is the work of Navy Warfare Development Command, which reports to the Commander, Fleet Forces Command, in Norfolk, Virginia, and the Strategic Studies Group at the Naval War College in Newport, Rhode Island. In addition, the Navy’s Fleet Battle Experiments, begun in 1997, have proven to be excellent vehicles for innovation and change that ultimately help to shape program decisions, and will continue to be a key element in the service’s Sea Trial initiatives.
Fleet Battle Experiments

The Navy’s Fleet Battle Experiments (FBEs) examine innovative warfighting concepts and emerging technologies and systems. They are true operational experiments in which failure is an option; there is important value in learning concepts that do not work, as well as those that show promise for the future. The service has conducted eleven FBEs through early 2004.

**Fleet Battle Experiment Alpha**, conducted in March 1997, used a sea-based Special Marine Air-Ground Task Force employing advanced technology and conducting dispersed operations on a distributed, non-contiguous battlefield. Some of the warfighting concepts included: sea-based command and control of operational maneuver; command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) capabilities for the Joint Task Force commander; advanced naval surface fire support; and theater ballistic missile defense.

**Fleet Battle Experiment Bravo (FBE-B)**, conducted in September 1997, focused on the joint fires coordination process known as “Ring of Fire” and the Joint Task Force targeting process for Global Positioning System-guided munitions, including a supporting command-and-control architecture known as “Silent Fury.”

**Fleet Battle Experiment Charlie (FBE-C)**, conducted in April-May 1998 during the USS Eisenhower (CVN-69) CVBG Joint Task Force Exercise, and addressed the Area Air Defense Commander and “Ring of Fire” concepts, in addition to the development of a Single Integrated Air Picture and air-missile engagements across a large area of operations.

**Fleet Battle Experiment Delta (FBE-D)**, conducted in October and November 1998 in conjunction with Foal Eagle ’98, an annual exercise sponsored by Combined Forces Command Korea, focused on four warfighting priorities: joint counter fire, joint counter special operations, joint theater and air missile defense, and amphibious operations.

**Fleet Battle Experiment Echo (FBE-E)**, conducted in March 1999, employed both real and simulated forces and future concepts for command, coordination, communications, fires and theater ballistic missile defense.

**Navy Program Assessment and Planning**

These service documents and processes are developed in conjunction with the Secretary of Defense’s “Defense Planning Guidance” and, internal to the Department of the Navy, with the Secretary of the Navy’s annual Planning Guidance. Implemented in Fall 2000 and carried forward in Fall 2002, a new organizational alignment within the Office of the Chief of Naval Operations (OPNAV) is helping to ensure the readiness and warfighting needs of our operating forces are met in the most efficient and effective manner possible.

To facilitate transformation from a threat-based to a capabilities-based planning process, the Deputy Chief of Naval Operations for Plans, Policies, and Operations (N3/N5) works with the Marine Corps to develop a prioritized list of warfighting capabilities based on the “Sea Power 21” construct. This list devolves the four Naval Capability Pillars (NCPs) of “Sea Power 21” (“Sea Strike, Sea Shield, Sea Basing and FORCEnet”) into more detailed Mission Capability Packages (MCPs) which are further refined into specific enabling capabilities. A panel of flag and general officers who represent the various mission and warfare areas then subjectively evaluates that list of capabilities, developed collaboratively by the Navy and Marine Corps. This panel—chosen for recent operational experience—employs an iterative process to compare capabilities and determine rank-order priority to the warfighter based on likely mission requirements in the future. The result is a list of prioritized capabilities, tied directly to the NCPs, that provides the NCDP with another input for determining the types and numbers of platforms entered into the program. This input complements the adequacy assessments that are conducted as part of the NCDP by the Director, Integrated Warf a re Division (N70).

**Planning and Programming**

Innovation and transformation have characterized the Navy’s program-planning process, certainly since the end of the Cold War but also throughout the service’s history. In May 2003, the service put in place a modification to the Department of Defense (DoD) Planning, Programming, and Budgeting System (PPBS). This change was accomplished through Management Initiative Decision (MID) 913. This process, known as the Planning, Programming, Budgeting, and Execution (PPBE) process was designed to improve the overall effectiveness of the Navy’s Planning, Programming, and Budgeting process by establishing a direct linkage from strategy to programmatic decisions through a single organization responsible for analysis of warfare capabilities while adding additional emphasis to program execution. The Prioritized “Sea Power 21” Warfighting Capabilities List provides a framework to establish the capability roadmaps developed by the Naval Capabilities Development Process. This new planning process is helping to ensure program synchronization, balance, and integration across all naval warfare areas, while remaining within fiscal constraints.
The resulting determination of requirements, allocation of resources, and responsive decision-making enables more flexible and timely responses in support of the combatant commanders and is the Navy’s input to the Defense Department’s Program Objective Memorandum and, ultimately, the President’s budget submission to Congress. The OPNAV Alignment Plan, an evolutionary process that began in October 2000, has ensured that operational needs are met in the most cost-effective manner.

**OPNAV Organizational Alignment**

The continued pre-eminence of our Navy requires speedy and agile organizational responses to accommodate today’s extraordinary rate of technological and other change. Organizational speed and agility are necessary both to counter risks to our future military preeminence and to take advantage of new opportunities. Rapid technological change means we must be able to quickly insert new technology, at reasonable cost, into our forces, systems, and processes.

Regardless of the actual size of the Navy’s budget, we continue to function in a fiscally constrained environment—particularly as the full dimensions of the global war on terrorism have yet to be determined. Thus, we must extract the maximum advantage from the resources provided, and demand a high rate of return on our investments. For the Navy, “organizational alignment” means that our organizations, systems, and processes must deliver exactly what they are designed to produce: a combat-capable Navy ready to sail in harm’s way. We can do that only if all Navy organizations are properly aligned to achieve our overall objectives. To that end, the Chief of Naval Operations initiated an alignment within the Navy’s headquarters organization to represent better requirements generation and to ensure the proper focus on manpower and personnel requirements, as well as current and future readiness, a realignment that has continued to undergird the demands of our “Sea Power 21” strategy. (Figure 1 shows the realigned OPNAV organization.)
sensors to address innovative operational concepts for defeating asymmetric threats, precision engagement, network-centric submarine warfare, information superiority, and casualty management.

**Fleet Battle Experiment Foxtrot (FBE-F)**, a joint and combined exercise in the Arabian Gulf conducted in November-December 1999, examined the concept of assured joint maritime access in protecting air and sea lines of communication. The FBE addressed parallel operations using a Joint Fires Element to coordinate protection for in-stride anti-submarine warfare and mine countermeasures efforts to open a choke point. A Nuclear, Biological and Chemical Warfare cell assisted the Joint Task Force commander to respond operationally to a WMD threat.

**Fleet Battle Experiment Golf (FBE-G)**, conducted in April 2000, assessed emerging technologies in a network-centric, joint and combined forces environment to support theater ballistic missile defense and time-critical targeting in the Mediterranean theater.

**Fleet Battle Experiment Hotel (FBE-H)**, conducted in August and September 2000, focused on the application of network-centric operations in gaining and sustaining access in support of follow-on Joint operations. This FBE employed anti-submarine warfare, mine countermeasures, theater air and missile defense, and information operations, in conjunction with supporting strike and joint fires in an integrated operation targeted at anti-access, sea-denial forces.

**Fleet Battle Experiment India (FBE-I)**, conducted in the San Diego op-area in June 2002, had the principle goal of operationalizing network-centric warfare. Testing a netted C4ISR architecture that provided participating Joint forces with wide-area connectivity, enhanced bandwidth, and “reachback” for enhanced situational awareness and decision-making, FBE-I addressed four main concerns: Joint fires, including time-critical targeting, in support of the Marine Corps’ emerging concept of Expeditionary Maneuver Warfare; sustaining information and knowledge advantage; optimizing littoral anti-submarine warfare capability by establishing real-time connectivity with a submarine operating at tactical speed and depth; and far-forward casualty management and medical services.

These changes have established a strong advocate for fleet readiness, consolidated fleet-readiness requirements, established increased visibility into warfare programs, better integrated the Director for Training function into the Navy staff, and established a new decision-making process within the organization. The establishment of the Deputy Chief of Naval Operations (DCNO) for Warfare Requirements and Programs (N7), a vice admiral reporting directly to the Chief of Naval Operations, consolidated management of naval and Navy-unique warfare programs and generation of warfare requirements within one office. This organization was formerly contained within the Deputy Chief of Naval Operations for Warfare Requirements, Resources, and Assessments (N8). Fleet readiness requirements and assessments will be the responsibility of the Deputy Chief of Naval Operations for Fleet Readiness and Logistics (N4). Realigning and refocusing the Deputy Chief of Naval Operations for Logistics to the DCNO for Fleet Readiness and Logistics consolidates fleet readiness requirements and assessments in one office. The N4 organization will be the “Fleet's voice” within the Navy staff, more fully developing operational readiness requirements, and assessing whether these requirements are being met throughout the Navy's resource-allocation process.

The alignment has also extended to current planning, programming, and policy offices on the OPNAV staff for the Navy's training programs to provide a stronger link between fleet training and readiness. This reorganization will place responsibility for fleet and unit training requirements under the responsibility of the DCNO for Fleet Readiness and Logistics (N4). The former Director for Training organization (N7) on the Navy staff has been integrated into N7. The Chief of Naval Training and Education (N00T) will remain a vice admiral reporting directly to the Chief of Naval Operations. This has already proven to be an important element in fulfilling the recommendations of the CNO's Executive Review of Navy Training (ERNT), the ongoing efforts of Task Force EXCEL (Excellence through Commitment to Education and Learning).

Two other organizations on the Navy staff have been created to establish a strengthened decision-making process for major policy and resource allocation decisions. The CNO Executive Board (CEB) is chaired by the CNO or VCNO and brings senior leaders from the Navy staff and the operating forces together as a “board of directors.” The role of this council is to advise the CNO and VCNO regarding decisions on key issues as well as providing a clear and unambiguous record of CNO decisions and direction on those issues. To enable debate, evaluation, and validation of new and competing program and readiness requirements, the Navy Requirements Oversight Council (NROC), chaired by the VCNO, serves to validate Navy requirements as well as provide the forum to prepare Navy positions to debate issues in the Joint Requirements Oversight Council (JROC).
Independent Capability Analysis and Assessment (ICAA)

A primary objective of the planning process is to develop a thorough understanding of how naval forces contribute to the nation’s joint warfighting capabilities. In 1992, “...From the Sea” outlined four key operational capabilities—Command, Control, and Surveillance; Battlespace Dominance; Power Projection; and Force Sustainment—required to execute operations in the littoral. Today, the Navy’s strategic planning guidance focuses on three overarching capability architectures that enable the projection of offensive and defensive naval power—Sea Strike, Sea Shield and Sea Basing—linked together by a seamless FORCEnet and carried out by Carrier Strike Groups, Expeditionary Strike Groups, Expeditionary Strike Forces, and other naval forces under a Fleet Response Plan by which U.S. strategy and policy are carried out. Within this conceptual architecture, the Navy’s program planning process of the DCNO for Warfare Requirements, Resources, and Assessments (N8) relies on broad-based analyses that capture the complexity of naval warfare requirements while balancing them within available resources.

Starting from the capability objectives, current and future technologies, systems, and platforms are assessed against their desired effectiveness in the joint-service environment, a process that addresses the balance and warfighting capability of the planned force structure and support areas. The analysis and review of the “health” of the individual warfare and warfare support capabilities is an ongoing, iterative process, linked to the development of the Navy Program Objectives Memorandum and Program Reviews.

Warfare Capability Analysis

Sea Strike
Sea Shield
Sea Basing
FORCEnet

The number of ships, submarines, and aircraft in the Fleet is the most visible manifestation of the Navy’s operational capabilities. The ICAAs assist Navy leadership in matching available resources with desired capabilities in the near, mid, and far terms. In addition to the numbers and types of ships, submarines, surface and amphibious warships, mine countermeasures vessels, aircraft, and special-purpose platforms, analysis considers lifecycle support, presence, and engagement requirements of the regional combatant commanders. Evolving threats, desired capabilities, developing technologies, doctrinal and operational concepts, and fiscal realities all play roles in shaping resource-allocation decisions leading to the naval forces the United States actually deploys. Force structure analysis examines the resources required to recapitalize or modernize the force, develop alternative force structure paths and subsequent consequences of the tradeoffs, and frame relevant issues via integrated decision timelines.
In summary, our capabilities-based approach selects and prioritizes the proper capabilities to ensure strategic objectives can be satisfied in diverse future crises and conflicts, while at the same time focuses on meeting current requirements. Driven by warfighting and combat needs, but including the flexibility to assure, dissuade, and deter, these capabilities must also support Joint Force Commanders and work hand-in-glove with allied and coalition forces, be fiscally affordable, and provide a continuum of crisis-response and combat capabilities to support naval, regional combatant commanders, and national commitments. The force planning approach articulated in the Defense Strategy will guide decisions on the overall shape, size, and global posture of U.S. military forces to:

➢ Defend the U.S. homeland and territory against direct attack;

➢ Operate in and from four forward regions to assure allies and friends, dissuade competitors, and deter and counter aggression and coercion;

➢ Surge globally to swiftly defeat adversaries in two overlapping focused military campaigns while preserving for the President the option to call for a decisive defeat in one conclusive military campaign—including the possibility of regime change and occupation; and

➢ Conduct a limited number of lesser contingencies.

**Sea Strike**

The Sea Strike “pillar” includes naval fires and amphibious warfare, the latter perhaps more appropriately characterized as Expeditionary Maneuver Warfare. When naval fires are required, the joint task force commander will have a variety of naval weapons to choose from, including accurate stand-off munitions delivered from aircraft, gun-fired precision-guided munitions, and sophisticated ballistic and cruise missiles launched from surface warships and submarines. The essence of this capability is aircraft carriers equipped with long-range attack aircraft, surface warships, and submarines capable of launching a variety of responsive, accurate long-range missiles, and robust Naval Fire Support (NFS). In addition, the Ohio-class ballistic missile submarine, armed with the D5 missile system, provides the nation the most survivable leg of the nuclear deterrent triad and is thus a key element of the Navy’s overall Sea Strike capabilities.

Expeditionary Maneuver Warfare includes the ability to mass overwhelming naval, joint, and allied military power and deliver it ashore to influence, deter, contain, or defeat an aggressor. Naval expeditionary forces provide the Joint task force commander with the ability to conduct military operations in an area of control extending from the open ocean, to the shore, and to those inland areas that can be attacked, supported, and defended directly from the sea. It is important to note that “littoral” operations are not “brown water” or “riverine”—today littoral operations can commence hundreds of miles from an adversary’s coast, as was clear in Operations Enduring Freedom and Iraqi Freedom. Soon, with warfighting enhancements in the Fleet, the
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Navy-Marine Corps team will be able to begin littoral operations more than 1,000 miles at sea. Navy and Marine Corps expeditionary forces—acting independently, jointly with the Army, Air Force, and Coast Guard, or combined with allied forces—provide the backbone of America’s ability to project credible military power throughout the world, quickly and effectively.

Sea Shield

The Sea Shield ICAA integrates the alignment of the Joint Full-Dimensional Protection and Strategic Deterrence Joint Warfare Capability Assessments with the Sea Shield capabilities inherent in “Sea Power 21.” This ICAA focuses on naval warfighting capabilities required to project defensive power from the sea, and assesses emerging technologies designed to extend naval defensive firepower far beyond the battle group to dominate the sea and littoral battlespace, project defense deep overland against cruise and ballistic missile threats, and provide the United States with a sea-based theater and strategic defense. In addition, Sea Shield enables the extension of homeland security to the fullest extent possible by including intelligence, surveillance, and reconnaissance assets; surface ships, maritime patrol aircraft, and ballistic missile submarines; and a mix of manned and unmanned systems operating on, above, and below the sea’s surface.

Persistent supremacy of the sea and littoral battlespace continues to be at the heart of U.S. national strategy. Forward-deployed naval forces will assure access for the joint force through surface warfare and anti-submarine warfare superiority, air supremacy, mine countermeasures and the employment of naval mines in offensive and defensive operations.

Surface warfare superiority involves those actions necessary to neutralize an adversary’s efforts to employ his surface warships against friendly forces. Antisubmarine warfare superiority includes capabilities that decisively neutralize or defeat an adversary’s use of his submarines, thereby assuring access, permitting the use of the sea as a maneuver space, and allowing sea basing. Air superiority provides naval forces the capability of assured access to theater airspace by U.S. and coalition forces. Defensive Counter-Air (DCA) operations focus on maintaining air superiority with the capability to detect, identify, intercept, and destroy enemy air forces with aircraft or air warfare-capable surface warships before they attack or penetrate the friendly air environment. Sea mining and offensive/defensive mine countermeasures include those capabilities used to employ mines against an adversary’s forces or to neutralize an enemy’s efforts to use mines against U.S. or allied forces. Acting either independently or as a joint force component, naval forces provide capabilities that are critical to ensuring freedom of maneuver and power projection from the sea.

Sea Basing

The Sea Basing ICAA focuses on sealift, airlift, the Combat Logistics Force, transportation, and the ordnance inventory. It includes the capability to move items both intra-theater and inter-theater. It also includes the overall health of the Navy
ordnance inventory against combat, theater and homeland security, and training requirements.

The specific naval surface and air logistics functions that enable the movement and support of U.S. combat forces and other friendly forces afloat and ashore—remains an area of intense interest—and are the key to successful sea basing capabilities. In combat operations in the Arabian Gulf—from Desert Shield/Desert Storm in 1990 to Operation Iraqi Freedom in 2004—Operation Sealift transported 95 percent of all supplies and equipment to and from the area of operations. Limited access during Operation Enduring Freedom in Afghanistan in 2001-2002 was overcome by operations based and sustained from the sea. The Navy’s strategic sealift fleet includes the Maritime Prepositioning Force (MPF), Army and Air Force Prepositioning Ships (APS), Surge Fleet, Ready Reserve Force, munitions ships, hospital ships and aviation maintenance ships. Commercial sealift assets may also be contracted to support specific mission requirements.

Prepositioned ships and surge sealift directly support Marine Corps Assault Echelon and Assault Follow-On Echelon operations, as well as Naval Construction Battalion (SeaBee) Force units. Sealift also carries Navy sustainment supplies and ammunition from storage sites to forward logistics bases where the Navy’s Combat Logistics Force (CLF) shuttleships pick up and deliver this material to combatant forces at sea. Likewise, Sealift is vital to Army and Air Force regional operations, as the nation’s land-based armed services are almost totally dependent upon the “steel bridge” of sealift ships to deliver everything a modern fighting force requires to accomplish its missions.

Sealift and the protection of in-transit ships by naval forces allow joint and allied forces to deploy and sustain operations, without dependence upon shore-side infrastructure in forward areas. In the near future, sea-based logistics assets will increasingly support emerging concepts for operational maneuver and ship-to-objective maneuver—the essence of Expeditionary Maneuver Warfare—and provide a full-spectrum of logistics, command and control, communications, and offensive and defensive fires for Joint Force Commanders.

**FORCEnet**

The FORCEnet team assesses capabilities underpinning network-centric warfare: communications and data networks; the common operational and tactical picture; and intelligence, surveillance and reconnaissance concepts, systems and programs. Many of these are key milestones on the Navy’s transformational roadmap. FORCEnet capabilities are key to execution of effects-based operations in that they enable the commander to achieve
“Knowledge Superiority” over the enemy, exploit his weaknesses, and counter his strengths during rapid, decisive operations.

**Warfare Support Analysis**

**Infrastructure**

**Manpower and Personnel**

**Readiness**

**Training and Education**

**Infrastructure**

While it seldom receives high visibility, infrastructure—bases, facilities, training areas, ranges, laboratories, buildings, piers, hospitals, and the like—comprises the essential framework for naval force readiness at home and abroad. Although it is not essential that the Navy have access to overseas facilities to carry out its worldwide missions, having facilities at key forward locations provides logistics support benefits and facilitates rapid response to threats and contingencies. Unlike other services, however, the Navy has the ability to bring its immediate logistics sustainment capabilities to forward operating areas. Beyond the first 30 days of conflict, advanced logistics bases provide fuel, ammunition, and maintenance sustainment support. Ashore infrastructure includes land, buildings, structures, and utilities within ports and air stations, repair and communication centers, storage and training areas, medical centers, and community support centers. This infrastructure is found at homeports as well as at advanced locations.

The Navy has a significant investment in installations—more than $110 billion in plant replacement value. During the 1990s, this inventory did not downsize in similar proportions to the Navy’s operating forces. Current maintenance, repair, and recapitalization rates are insufficient to maintain this infrastructure, much of which is inappropriate for 21st-century needs. Age exacerbates this problem—the average age of Navy buildings is more than 50 years, including numerous historical buildings maintained for heritage-preservation purposes. The Navy must shift its focus ashore from the current status quo to reshaping regional footprints and advanced logistics bases to ensure affordable, quality support for future naval operations.

Critical to sustaining readiness is our ability to train as we fight through continued access to ranges and operational exercise areas (OPAREAS). Our military training ranges are national assets that allow our forces to train in a controlled, realistic, and safe environment. But our ranges and OPAREAS are increasingly surrounded by urban development and subject to increasing environmental challenges that have begun to affect the Navy’s ability to execute realistic training. The Navy is therefore implementing a fully integrated, systematic strategy that balances the dual goals of national security and environmental stewardship at our training ranges and exercise areas. Key to this training range sustainment effort is the Navy’s commitment to the Tactical Training Theater Assessment Planning (TAP) initiative support-
ed by the “At-Sea Policy” and the Navy doctrine publication “Naval Warfighting” (NWP 4-11). With funding starting in FY 2004, the TAP initiative will provide a sound environmental range investment strategy for sustainable ranges/OPAREAS. This overarching sustainability program will seize the environmental high ground ensuring effective stewardship of the Navy’s ranges/OPAREAS, allowing our forces to conduct realistic training in an environmentally sound manner. Accordingly, the Navy will continue to remain a good steward of the environment, while preserving the flexibility necessary for the Navy and the Marine Corps to train and exercise ashore and at sea.

Infrastructure also includes on shore capabilities necessary to support operational units. It includes the capability to provide waterfront and air operations; community support, including housing, medical, Morale, Welfare and Recreation (MWR), and child-care services; readiness support, including shipyards and Naval Aviation Depots (NADEPs); ranges; and shore force protection. Our challenge is to find ways to support an infrastructure that uses a smaller percentage of Navy resources while maintaining acceptable Quality of Service for our Sailors and their families, and force-wide readiness. The Navy will, therefore, support the additional Base-Realignment and Closure (BRAC) round in 2005, looking to shed excess and over-age infrastructure in a responsible manner and enhance operational readiness and our Sailors’ Quality of Service.

The Navy’s logistics transformation vision is captured in our High-Yield Logistics Transformation strategy. This strategy seeks responsive, timely, and high-quality support to forward-stationed forces throughout the world, while reducing the Navy’s total ownership costs. The focus areas of this strategy are: optimization through best-value acquisitions; customer support and communication; process innovation; and workforce productivity. The strategy has three overall objectives. The first is to ensure extraordinary support to the warfighter. The second is strategically to source infrastructure, maintenance, and service functions, as well as our supply inventory, where it makes both operational and business sense. The third and final objective is to optimize resource effectiveness and reduce redundancy within our remaining infrastructure.

**Manpower and Personnel**

The Navy’s people—Active, Reserve and civilian—are the most essential part of our warfighting capability. Our capacity to provide sufficient operational forces, as well as shore support, to sustain a force structure with credible naval combat power is indispensable to meeting
the missions of the Navy. Among other things, we must address critical naval capabilities to support national strategic requirements for homeland security and defense, persistent presence in forward areas, deterrence, prompt and assured crisis response, and warfighting. The personnel system must provide for the acquisition, development, retention, and management of the civilian and military workforce, including programs for recruiting, quality of life, community management, and distribution of personnel.

Finally, we must take human factors into account in the design, engineering, integration, and operation of our weapon systems and platforms. This focus on human-factors engineering and human-systems integration has implications for recruiting, training, compensation, detailing, and development of our Sailors’ careers. The fundamental principle that will continue to shape our approach is Mission First… Sailors Always. Moreover, our Sea Power 21 vision demands a highly educated, experienced, and flexible force capable of sustaining our technical advantage to swiftly and convincingly defeat our enemies. Sea Warrior is the critical bridge to this future, which seeks to maximize human capital through transformed manpower processes. Sea Warrior reinforces the Navy’s commitment to the growth and development of its most valuable resource, people, and ensures mission success by delivering the right Sailors at the right time, to the right places, and in the right numbers and skill sets.

**Readiness**

Sea Enterprise is changing the way the Navy does business—finding innovative and less costly methods while supporting the critical training, supply, and maintenance programs that are essential to readiness. This team evaluates these programs and reviews current indicators and trends to ensure that readiness is maintained. Included in the readiness area are Navy operating funds, force operations, flying hour/steaming day programs, all levels of maintenance, spares, ordnance and fuel, and safety and survivability.

**Training and Education**

Training and education capabilities are provided in four major functional categories: accessions; skills; professional development; and unit/force training. Programs include the staff, facilities, equipment, and services required to train. The objective of naval training and education programs is to deliver, efficiently and effectively, high-quality training and education that provides a career-long continuum supporting Navy operational readiness and personal excellence.
Naval Capabilities Development Process

The DCNO for Warfare Requirements and Programs (N6/N7) is the executive agent and lead for implementing the Naval Capabilities Development Process (NCDP), which in November 2002 superseded the Battle Force Capability Assessment and Programming Process (BFCAPP), put in place the year before. The Navy thus sharpened the focus on capability-driven warfighting requirements to enhance the ability to communicate a long-term warfighting vision that shapes research and development, procurement, force structure, and capabilities to counter threats and achieve mission success. The NCDP addresses requirements both within and beyond the current Future Years Defense Plan (FYDP) programming horizon. The process looks to establish an affordable long-range Naval Capability Plan (NCP) and an Integrated Sponsor’s Program Proposal (ISPP) for warfare systems that will meet the operational needs of the Fleet and regional combatant commanders. The goal is to develop integrated, executable, and realistic sponsors’ resource allocation proposals that deliver the greatest degree of balanced warfighting capability within available resources. If resources are insufficient to deliver warfighting wholeness, the process will quantify the remaining risk and determine the “above-core” priorities to mitigate it.

This new process established Warfare Sponsors within OPNAV who are responsible for developing Mission Capabilities Packages (MCPs) within the four naval capability “pillars”—Sea Strike, Sea Shield, Sea Basing, and FORCEnet—that cross and link platform-specific communities (e.g., Naval Aviation, Surface Warfare), and coordinating the MCPs with resource sponsors, fleet commanders, and the acquisition community. Each of the four naval capability pillars is supported by two or more MCPs, which serve as the primary mechanism to identify the current baselines of capabilities and to forecast capability evolution, thus contributing to comprehensive planning and programming for integrated systems capabilities identified in Navy and Joint-Service strategies.
Critical issues to be addressed include redundancy among systems, interoperability, reasonableness of cost and performance, and program schedule.

The four naval capability plans comprise all MCPs for each Naval Capability pillar and become the Navy’s warfare investment strategy for programming operational capabilities. The Integrated Sponsor’s Program Proposal, which merges the NCPs and resource-sponsor programming input, is approved by N6/N7 and presented to the DCNO for Resources, Warfare Requirements, and Assessments (N8) as a consolidated programming proposal that integrates all N6/N7 warfare areas within a specific Program Review or Program Objective Memorandum developed by N8.

**Navy Program Implementation**

Even as the Navy continues its transformation to the capabilities and forces needed for the future, we must balance the costs of modernization and recapitalization—future readiness—with maintaining today’s current readiness for missions and tasks that may arise at any time. This requires balancing recapitalization and modernization of aircraft, ships, submarines, and infrastructure with funding today’s operating forces and providing a high Quality of Service for our people and their families.
Based on previous experience, we know we must put in place the resources to attract, train, and retain the people we need for the future. That said, we must also ensure that our highly skilled and dedicated Sailors have the necessary tools for the complex and demanding jobs that lie ahead. The balancing of priorities and the requisite resource allocation decisions comprise the key portion of the Navy’s PPBE process: programming and budgeting. The result is a program that allocates resources to meet the Navy’s highest priorities at some level of risk as the critical needs are funded at the expense of lower-priority programs. These difficult decisions are based on intensive analysis, informed reviews, and critical projections constrained by the reality of limited resources.

**Quality of Service**

Manpower remains the Navy’s number-one priority, and ensuring a high Quality of Service is an essential element of the Service’s ability to attract and keep the best and brightest people. Quality of Service is a balanced combination of Quality of Life and Quality of Work programs, both of which are key contributors to meeting manpower goals.

**Quality of Life**

An important element of our Quality of Service approach are the Quality of Life programs comprised of numerous services that add to the well being of our people and are important factors in both overall readiness and retention. Quality of Life traditionally includes programs focusing on compensation, safety and health, medical care, military accommodations (both shore- and sea-based), recreation, Personnel Tempo (PERSTEMPO) limits in addition to legal, chaplain, community, and family services. These Quality of Life elements provide support for our families and enable Sailors to focus on their prime responsibility: mission accomplishment.

**Quality of Work**

We ask a lot of our Sailors. In return we owe them a high Quality of Work standard—proper tools, sufficient supplies, modern facilities, and a physical working environment equal to the importance of the mission and commensurate with those offered by competing careers. Their work must be centered on honing their professional skills and enhancing the mission effectiveness. A satisfying Quality of Work is one of the most important factors in retaining our best people. Efforts to enhance Quality of Work include: improved operational unit manning; Smart Work initiatives that capture new technologies and seek better ways to do business; Inter-Deployment Training Cycle workload reduction initiatives; career-long emphasis on professional development; and increasing workplace and shore facilities.
Both Quality of Life and Quality of Work are essential to the Navy’s ability to attract and retain highly talented people. Job satisfaction, ongoing professional growth, high-quality training and education, personal recognition, confidence in our promises to them and their families—all comprise crucial elements of the Navy’s Quality of Service. Sailors must draw personal and professional pride and satisfaction from what they do throughout their service to the nation. They must sense that what they do is important and worth their personal sacrifices. This is central to both current and future force readiness.

**Force Readiness**

Numbers matter; quantity has a quality all its own. While the capabilities of tomorrow’s netted sensors and weapons will increase the potency of each ship and aircraft, numbers will always be of concern: a ship or an aircraft cannot be in two places at once. Moreover, insufficient ordnance, supplies, and equipment pose significant crisis-response and warfighting risks. All carrier strike groups (CSGs) that deployed during 2003 engaged in actual combat operations during their deployments, including seven carriers that supported coalition forces during Operation Iraqi Freedom—the successful outcomes being dependent upon having the right weapons and enough of them to do the job at hand. Even when combat does not occur, shortages greatly compound the work required of our Sailors, as older equipment is kept operating beyond its intended service life and shortages force the “cross-decking” of equipment, spares, supplies, and ordnance—and sometimes people, as well. At the end of 2002, for example, the USS George Washington (CVN-73) battle group had just returned from a six-month deployment only to be placed on 96-hour notice to redeploy, should that have been necessary to support operations against Saddam Hussein’s regime.

Under normal, more routine situations, the Navy has continued to meet its commitments primarily by drawing upon the forward-deployed, in-theater “rotational” forces, rather than requiring additional deployments of units that have just returned from, or are beginning to work up for, deployments. We have been able to do this mainly by demanding more from our people and our equipment. But this cannot go on indefinitely. Indeed, while the 1997 Quadrennial Defense Review concluded, and the 2001 QDR confirmed, that the Navy must sustain a force of some 305 ships and 12 carrier battle groups (CVBGs)—down from the 1993 Bottom-Up Review requirement of 15 CVBGs and 14 carrier air wings, for a total of 346 ships—to satisfy the operational requirements of the Military Strategy, given resource limitations—current projections show that the Navy will have difficulty sustaining even such a downsized force without “topline” budget relief. (Figures 2-6 illustrate current projections for personnel and force structure, aircraft carriers, attack submarines, surface warships, and amphibious assault ships.)

As the Navy’s senior leadership has testified, a force of about 300 ships is marginally sufficient—within an acceptable level of risk—to meet near-term forward-presence and crisis-response needs. However, mounting evidence suggests that our 300 ships—some
of which are not warships—will not be enough in the future. Moreover, unless older ships are retained beyond current programmed service lives and the acquisition of new warships is accelerated, getting to and sustaining even a 300-ship Fleet will be a difficult proposition. Recent force projections, based on the FY 2004 Program Objective Memorandum, indicate that the “QDR Navy” cannot be sustained without an increase in ship construction. Indeed, in the near term, the active forces will decline to some 290 ships. Unless rectified, this will bring into question the Navy’s ability to carry all roles, missions, and tasks identified in the Defense Planning Guidance and support emerging strategies. More recently, the Chief of Naval Operations has cited a force-level objective of approximately 375 ships to satisfy “Sea Power 21” requirements.
As an example of being spread too thin, carrier underway time during deployments has risen steadily from historical norms. In 1998-1999, as well as the fall 2001, the aircraft carrier homeported in Japan had to respond to unplanned deployments to the Arabian Gulf and Arabian Sea to cover our commitments there. We simply had no other recourse than to "surge" that carrier into a forward operating area at times in its operational cycle when critical maintenance still needed to be carried out. Likewise, at the start of Operation Allied Force in early spring 1999, the nation had no aircraft carrier battle group in the Mediterranean, which constrained the amount of pressure NATO could apply against Serbian forces, and the carrier had to be redeployed from another area of operations. And, in the immediate aftermath of the 11 September 2001 terrorist attacks on the U.S., the USS Enterprise (CVN-65) had begun to return home from a six-month deployment but remained in the region to support the initial strikes in Operation Enduring Freedom.

Similarly, we are growing critically short of certain "low-density/high-demand" (LD/HD) aircraft, particularly the EA-6B Prowler electronic-warfare (EW) aircraft. The demands of today’s chronic-crisis and combat threat environment, in which even minor countries can have sophisticated air defenses, drive the need for effective electronic warfare and suppression of enemy air defenses. The decision to retire the Air Force EF-111A Raven EW aircraft and to assign all Department of Defense radar-jamming missions to the Prowler adds to the significance of the EA-6B in Joint warfare. With its jamming and High-Speed Anti-Radiation...
Missile (HARM) capability, the Prowler provides capabilities to deny an adversary’s use of radar and communications unmatched by any airborne platform worldwide. These capabilities were amply demonstrated during the 12-year enforcement of “no-fly” zones in Iraq and experiences in Operations Allied Force, Enduring Freedom, and Iraqi Freedom. Its proven effectiveness in combat underscored the Prowler’s role as an indispensable element of coalition air operations. To meet future Airborne Electronic Attack (AEA) requirements, the EA-18G variant of the F/A-18 Hornet strike-fighter will replace the U.S. Navy carrier-based EA-6B force with an IOC of 2009.

Various studies following the 1997 QDR concluded that specified force structure for nuclear-powered attack submarines and surface warships will not be sufficient to meet the future operational requirements or to satisfy strategic guidance for future conflicts. In the 1999 nuclear-powered attack submarine (SSN) study, the Joint Chiefs of Staff (JCS) concluded that by 2012 the Navy would need as many as 68 modern SSNs, of which 18 should be Virginia (SSN-774)-class submarines. This is a significant increase from the 1997 QDR conclusion of 45-55 SSNs just to meet current operational commitments. Additionally, the JCS study concluded that any fewer than 55 SSNs in 2015 would leave the combatant commanders with insufficient capability to respond to time-critical, urgent demands. An attack submarine force-level study conducted in 2002 by the Navy identified 55 attack submarines as the minimum warfighting requirement to meet the 2001 QDR force-sizing construct. For this reason, the Navy is investigating proposals to refuel in-service Los Angeles (SSN-688) class submarines as well as to accelerate procurement of Virginia SSNs.

Our surface warship forces are likewise experiencing operational and personnel tempos rarely endured during the Cold War. The 2001 QDR acknowledged this and directed the four Armed Services in the Department of Defense to restore readiness and transform. To accomplish this, the Navy has recognized the need for a family of surface combatants bringing transformational capabilities to the service. This family of ships—centered on the
next-generation multi-mission destroyer, DD(X), and including upgraded in-service Aegis warships, a next-generation cruiser, CG(X), and the Littoral Combat Ship (LCS)—will provide naval and joint force commanders with a range of warfighting capabilities across the spectrum of warfare. From fighting and winning in the tough littoral environment with the LCS, to the theater-wide strategic reach of the CG(X), the Navy’s future surface warships will be designed from their keels up to operate as critical elements of a forward-stationed, distributed, networked, joint force.

To help meet near- and mid-term needs, the Navy will upgrade the in-service Aegis cruisers and destroyers with selected leading-edge technologies, some of which are being developed during the DD(X), CG(X), and LCS design and production processes. This will ensure that this vital core of the multi-mission Fleet will maintain operational effectiveness throughout their lifetimes and until the DD(X) and CG(X) programs come to fruition. We will also maintain the force structure of our Oliver Hazard Perry (FFG-7)-class frigates by modernizing their hull, mechanical and electrical (HM&E) systems and conducting a limited combat-systems upgrade to improve their survivability in the littoral combat environment. Because of their high operational costs and limited room for combat system growth or modernization, the Spruance (DD-963)-class destroyers will be decommissioned during the next four years.

Our Combat Logistics Force was well represented in Operation Iraqi Freedom and provided outstanding service to the ships in the Mediterranean, Arabian Gulf, and Red Sea. To increase the peacetime availability of these ships, we are continuing the transition of the remaining Navy-manned Supply (AOE-6) fast combat support ships to the Military Sealift Command. The Lewis and Clark (T-AKE) stores/ammunition ship program is on track for replacing the aging T-AFS and T-AE store ships. As the Sacramento (AOE-1) fast combat support ships are nearing the ends of their
service lives and will be decommissioned in the next two years, we have programmed the T-AOE (X) as their replacement and will field it as soon as fiscal realities permit.

The requirement for our amphibious warfare forces includes the capability to lift the assault echelon of 3.0 Marine Expeditionary Brigade (MEB) equivalents. This 3.0 MEB equivalent is the troops, aircraft, vehicles, equipment and cargo of a Marine Expeditionary Force (MEF), which is the primary Marine Air Ground Task Force (MAGTF) that is task-organized to fight and win in conflicts ranging from smaller contingencies to regional war. Currently, lift is available for only 12 Amphibious Ready Groups, or 2.5 MEB equivalents. However, fiscal constraints have limited our assault lift capacity to less than the established 2.5 MEB goal; we are today a 2.1 MEB lift force.

We must, therefore, continue to focus on the transformation of our amphibious warfare shipping-large-deck/aviation-capable amphibious assault ships, dock landing ships, landing platform dock ships-to a force that can affordably meet future needs. Critical elements of our plan include the acquisition of San Antonio (LPD-17)-class amphibious platform docks, the total number to be acquired is under review; the design, engineering, and acquisition of the next-generation amphibious assault ship (LHA-R); and modernization of in-service ships. If we become frustrated in our goal for the LPD-17 program, our lift capability will atrophy to less than the current 2.1 MEB equivalents by the end of the decade.

Since mission accomplishment is our top priority, our focus on readiness is correct. The Fleet Response Plan (FRP), developed last year under the guidance of CFCC, is designed to better support the National Security Strategy with persistent naval capabilities that are both rotational and surgeable. The FRP accelerates the Navy’s advantage in responding whenever the commander-in-chief needs our naval forces and harnesses the Navy’s enhanced speed and agility to ensure we arrive with overpowering force whenever needed.
Current Readiness

One-third of our Fleet is deployed on average every day, and we are focusing on ways to ensure that deployed readiness remains high. We know too that non-deployed readiness bears the brunt of supporting our forward-deployed presence. Although we have seen some improvement during the last four years in reducing shortfalls, the limited availability of support material for our non-deployed units continues to be a significant readiness challenge. While we have made a significant funding commitment in FY 2004, sufficient resources must be sustained to ensure non-deployed readiness is assured.

In some areas, we are showing slight improvement, particularly in CSG manning and Naval Aviation. With regard to the latter, we are continually reviewing the flying hour program to ensure our funding reflects the increasing operational costs associated with our aging aircraft. The Navy’s aviation force is now the oldest it has ever been in its history—an average age of nearly 19 years. And, we expect that the average age will increase by 0.5 years per year, at programmed procurement rates. Our cost models do not accurately predict the true cost of operating our aviation assets. The same holds true for aircraft depot maintenance, which ensures that engine and airframe maintenance is sufficient to meet fleet requirements for available aircraft and spare engines. We are also seeing some improvement in the reduction of aircraft bare firewalls, aircraft cannibalizations, the size of our maintenance backlogs, and the percent of aircraft available. That said, it will take continued emphasis across the full spectrum of readiness areas, together with the necessary funding, to continue the recovery. Until we have achieved a modernized force, we will continue to face the challenge of the increasing costs to maintain the legacy, aging and increasingly obsolescent force.
Shortfalls in maintenance, spare parts and support equipment have affected our training readiness among all Navy non-deployed forces. Surface ships, submarines and aircraft squadrons in the earlier stages of the Interdeployment Readiness Cycle are confronted with the reality of having to train with fewer resources, because units in the latter stages of the process have priority to ensure combat ready status.

Likewise, there is growing concern about the Navy’s inventories of precision-guided munitions (PGMs), including the Joint Stand-Off Weapon (JSOW), Joint Direct-Attack Munition (JDAM), and the Tomahawk land-attack cruise missile (TLAM). Although the Congress has helped to address this challenge, specifically responding to the high expenditure rates of PGMs that have occurred as a result of recent contingency operations, we are still below the current warfighting requirement. The PGM shortfall is a major risk-driver for our forces in our ability to defeat decisively one of two adversaries, to include invading and occupying enemy territory, and decisively imposing our will on any one aggressor of our choosing—the “2” and “1” elements of the “Defense Guidance.”

The Navy is also faced with several external factors that are impeding our ability to test, train and operate safely and effectively. Continued military readiness depends on reliable access to all necessary training, testing, and operational exercise areas. Our military training ranges are national assets that allow our forces to train in a controlled, realistic, and safe environment. Urban encroachment, the obligations of environmental compliance on land and at sea, and concerns about noise and airspace congestion require a comprehensive approach to sustain access. Untrained or under-trained people cannot perform well in combat and present an increasing risk during peace. The Navy has
initiated a comprehensive training range and operating area sustainment program to ensure continued access to ranges and operating areas. A Navy Range Office has been established within N4 to oversee this important effort.

The use of live ordnance, for example, is a vital means of training our forces in combined arms operations. The inability to conduct coordinated live-fire exercises from ships and strike aircraft is particularly detrimental to readiness, given that almost routinely carrier battle groups continue to engage in combat operations soon after arrival in theater. Our ability to train jointly, especially with the Marine Corps, is being affected by the uncertainty of live-fire, combined-arms training for Atlantic Fleet Forces. The growing lack of realistic training increases the risk to our Sailors and Marines, and their missions. Our forces should get their first experience with live arms before they engage in actual combat, a goal implicit in our philosophy of train as you fight.

The Fleet has gotten smaller, and the number of ships we routinely deploy with each battle group has decreased. During the downsizing of the 1990s, from the “600-Ship,” 15-CVBG, 14-carrier air wing force during the 1980s to the approximately 315 warships, 12 battle groups, ten air wings, and 12 amphibious ready groups at the turn of the century, the demand for deployed naval forces has increased. Because our carrier strike groups and expeditionary strike groups routinely deploy with fewer surface combatants than ten years ago, theater commanders have fewer assets to cover commitments, and must time-share assets among theater commanders, often leaving gaps in coverage at times when we can least afford them. Fewer assets mean more underway time per unit. Increased operational tempo results in additional wear and tear on our most valuable resource, our people and their families, not to mention the Navy’s ships, aircraft and equipment. The end result is that our ships require more maintenance, which increasingly has had to be deferred because of insufficient resources. It is vitally important that we begin to fund 100 percent of our manning, maintenance, ordnance, modernization, recapitalization, and training requirements. Mission success and lives are at stake.

The growing number of carrier battle group “gaps” in operational coverage has led to internal assessments of the need for highly flexible and effective Carrier Strike Groups, Expeditionary Strike Groups, and Expeditionary Strike Forces to satisfy the requirements of the nation’s security and military strategies. Coupled with independent operations by missile defense surface action groups (SAGs) and nuclear-powered guided missile/special operations submarines (SSGNs), the future Fleet of approximately 375 ships will dramatically increase the operational flexibility, global reach, and striking power from today’s approximately 19 independent strike groups (12 CVBGs and seven Middle-East Force surface action groups) to 37 independent strike groups. Under the new Fleet Response Plan, these 37 strike groups will include 12 Carrier Strike Groups, 12 Expeditionary Strike Groups, nine Strike/Missile Defense SAGs, and four SSGN Strike/SOF forces. The bottom line is that in this way Navy “presence with a purpose,” operational flexibility under the Fleet Response Plan, and warfighting effectiveness will be optimized in support of the “1-4-2-1” strategic guidance.
Future Readiness

Although sustaining current operational readiness is a top priority, maintaining aging equipment and infrastructure and modernizing our forces are growing concerns. The need to pay for current readiness first must be balanced with the imperatives to improve and ultimately replace the equipment we have in the Fleet today. Modernization enables our current forces to continue to be valuable warfighting assets in the years ahead while concurrently trying to mitigate escalating support costs of aging equipment. Also, as technological cycle times are now shorter than platform service life, it is fiscally prudent to modernize the force through timely upgrades, and, when it makes good operational and business sense to do so, to incorporate commercial open-source technologies and systems.

Adequate readiness can only be sustained in the future with modernization and recapitalization programs that deliver adequate numbers of technologically superior platforms and systems to the Fleet. This has become a challenging task. The Fleet is aging and there is real and growing tension between maintaining near-term readiness while supporting future modernization and recapitalization. We are pursuing initiatives that will lower our cost of doing business so we can maintain near-term readiness and still invest more in the future.

Sustained future naval readiness begins with a recapitalization program that delivers the right number of technologically superior platforms and systems for the Fleet. We therefore need to invest with a focused and expanded program to maintain naval superiority well into the first half of the 21st century. Current Department of Defense plans require an 8-10 ship and 180-210

**FIGURE 7 | FY 2005 - 2009 Aircraft Procurement Plan**
aircraft per year build rate to sustain the 1997/2001 QDR force. The actual number of ships, aircraft, ordnance, and spare parts in our plan is not sufficient to meet this need; and will not provide the assets necessary to carry out critical missions and tasks under current "Sea Power 21" guidance, which requires a Fleet of approximately 375 ships and procurement of 11 ships per year. This is an ambitious goal, one that we cannot achieve unless we are a smarter and more efficient consumer of resources. (Figures 7 and 8 lay out the current acquisition plan for ships and aircraft.)

That said, the current ship building and modernization plan and aircraft acquisition and modernization programs do not deal adequately with the "bow wave" of investments that we anticipate will be needed to meet even mid-term future commitments and requirements, much less those beyond the FYDP. While the specific numbers, types, and mix of ships and aircraft will—and should—be debated, several years of high-tempo operations and analysis point to the need for more ships and aircraft than we currently have. Many existing ships require modernization in combat systems as well as hull, mechanical and electrical systems. The steady erosion of the service lives of our platforms and equipment and lack of a viable recovery plan will eventually lead to a point where the Navy will be unable to sustain operational commitments. In short, numbers matter; quantity has a quality all its own. For this reason, the CNO has called for a program to reach and sustain a Navy of approximately 375 ships.

Moreover, in addition to seeking additional research and development and acquisition funding, the Navy has reinvigorated an aggressive effort to reinvent its shore establishment to free-up funds for future readiness and modernization of the operating forces. There are three primary components of this effort: the reduction of infrastructure costs and consolidation of redundant services and functions; the establishment of Navy-wide standards and metrics for all shore installation functions; and the identification and implementation of best business practices, particularly under the Sea Enterprise initiative.
INVESTING TODAY FOR TOMORROW’S CHALLENGES

The “CNO Guidance for 2004” makes clear that “Sea Power 21” is the service’s vision to deliver enhanced capabilities through new concepts, technologies, organizational initiatives, and improved acquisition processes. The objective now is to accelerate our advantages. This requires dedication to a process of continual innovation and commitment to total jointness. Among the critical challenges we face is finding and allocating resources to recapitalize the Fleet.

The allocation of resources for today’s and tomorrow’s naval forces is like buying an insurance policy. We do not need to know precisely how or where we will use these forces in order to see their value—indeed, our value is greater because we are useful virtually anywhere. Our mobility, adaptability, variable visibility, and cooperative and independent capabilities combine with our knowledge of the battlespace and immense firepower to make us an especially usable and useful force for assuring U.S. security, at home and abroad. Thus, despite the challenges facing us today, we are convinced that ready and modern naval forces will remain vital to the nation’s security—an insurance policy against threats and challenges to U.S. interests, citizens, and friends. The balancing of present needs and future imperatives within available resources will always be a complex endeavor.

Chapter Three provides summaries of the Navy’s programs for our people, our sensor and weapon systems, and our ships, aircraft, and submarines—the foundation for tomorrow’s Fleet. Balanced against competing priorities within available resources, these programs set our course for the future, to ensure that the vision of “Sea Power 21” indeed will be realized.