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## *Flexible Responsiveness*

**E**very time a carrier deploys it carries leading-edge systems that—when combined with effective tactics and well-trained people—ensure it can meet almost any warfighting requirement.

### ***Carrier Air Wings***

The reshaping of our Navy's force structure has had a significant impact on the number, focus, size and capabilities of our carrier air wings. The current force of 10 active carrier air wings and one reserve air wing is based on the 1993 Department of Defense Bottom-Up Review. To afford this number of air wings, and to equip them with modernized aircraft, the Navy has

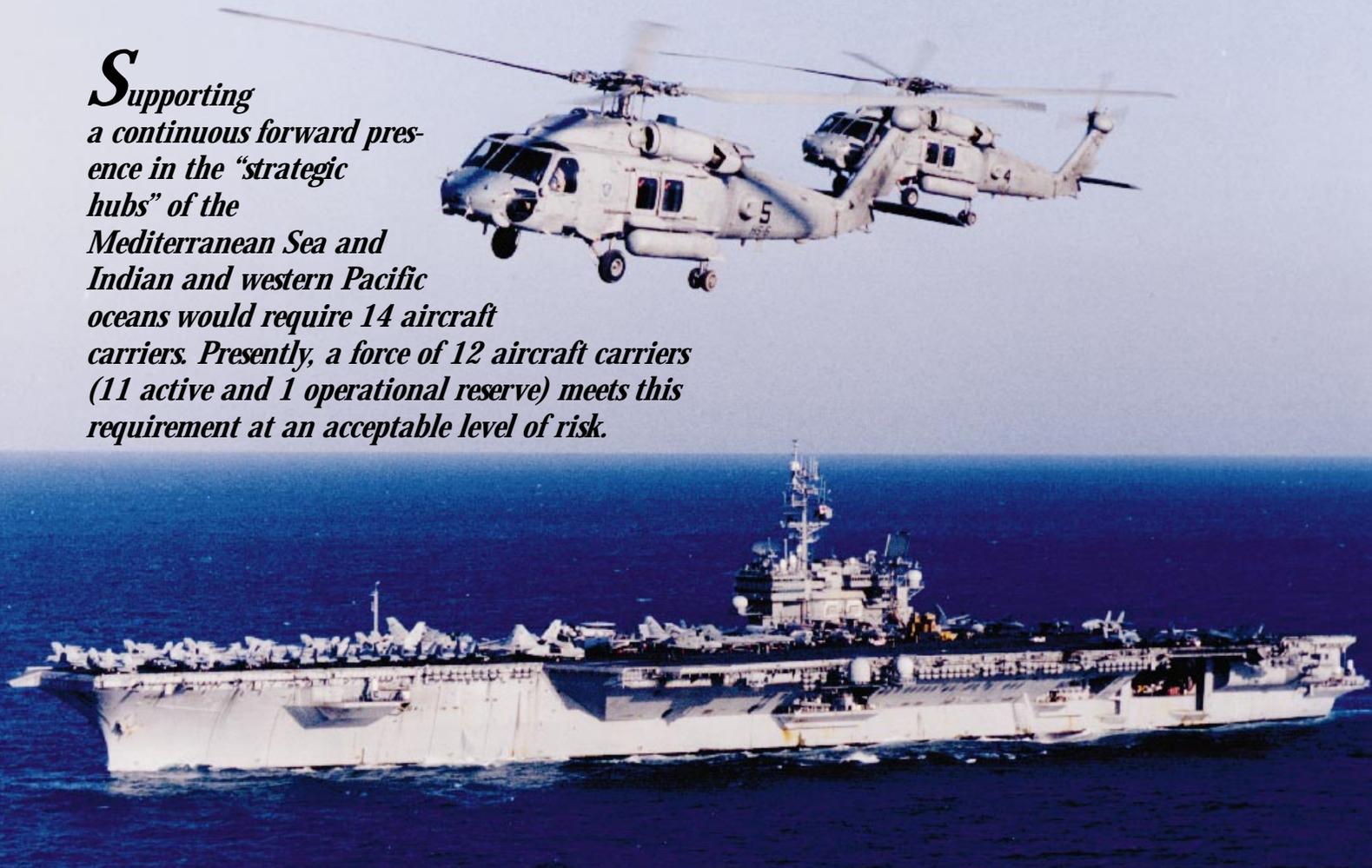
restructured the wings' composition.

The Navy is in the process of reducing the number of aircraft types that fly from carrier decks—moving toward a smaller, multipurpose force that consists of more capable and more lethal multimission aircraft. Retirement of the venerable A-6E *Intruder* and transition to a mix of F/A-18 *Hornets* and F-14 *Tomcats* is essentially complete, although two air wings will operate with an addi-

tional F-14 squadron as an F/A-18 placeholder until the fleet introduction of the F/A-18E in 2001. Also, as many as four Marine Corps F/A-18 squadrons will deploy with Navy carrier air wings.

The carrier air wing's multimission capability is considerable in terms of flexibility, effectiveness and sustainability. The tactical support provided by the electronic warfare capabilities of the EA-6B *Prowler*, the multipur-

***Supporting a continuous forward presence in the “strategic hubs” of the Mediterranean Sea and Indian and western Pacific oceans would require 14 aircraft carriers. Presently, a force of 12 aircraft carriers (11 active and 1 operational reserve) meets this requirement at an acceptable level of risk.***



pose, multisensor capabilities of the E-2C *Hawkeye*, and the expanded surveillance and reconnaissance role of the S-3B *Viking* and ES-3A *Shadow* make the air wing the most capable power projection team ever assembled. The C-2A *Greyhound* provides carrier onboard deliveries necessary to sustain the air wing and other battle group assets. Completing the air wing mix are the SH-60F and HH-60H *Seahawk* helicopters, which provide multimission close-in support and combat search and rescue.

### ***Marine Corps Aviation***

The Marine Corps tailored organization for combat, the Marine Air-Ground Task Force (MAGTF), exploits the synergy inherent in closely integrated air and ground operations. Effectively blending infantry forces, artillery, armor and

tactical aviation, the MAGTF generates maximum combat power with minimum logistical footprint. Each MAGTF is an integrated combined arms team.

Naval Aviation supports the MAGTF in six functional warfare areas: offensive air support, antiair warfare, assault support, air reconnaissance, electronic warfare and control of aircraft and missiles. To perform these missions, the Marines require several different types of aircraft, both fixed- and rotary-wing, including unmanned aerial vehicles, as well as the support equipment to maintain and control them. Presently, Marine aircraft are deployed on board amphibious ships as part of the Marine Expeditionary Unit (Special Operations Capable) and with several carrier air wings.

In order to enhance Marine avia-

tion's role in MAGTF expeditionary operations, the Commandant of the Marine Corps has set a goal to reduce the number of models of aircraft that are being operated. A simultaneous objective is to achieve an all short-takeoff/vertical-landing aviation component. This transition will be accomplished while ensuring that state-of-the-art capabilities are maintained in the required functional areas. Modernization initiatives to enhance night and adverse weather effectiveness, improve aircraft supportability, reliability and maintainability, and reduce strategic lift dependency also remain essential to the fulfillment of our warfighting requirements.

### **A Balanced Approach**

As Naval Aviation moves into the 21st century, we will continue to use

a systems approach to improve its capabilities. This approach entails a balance of affordable, multimission platforms, systems and weapons. New aircraft and technology will provide Naval Aviation with greater lethality, increased reliability and enhanced survivability. Reducing the number of aircraft types and transitioning from single mission to multi-mission platforms will provide Naval Aviation with greater mission flexibility and cost-effective maintenance, as well as a flexible logistics support base.

The graphic at right illustrates how an approach consisting of many contributing elements results in mission success. Like the stability inherent in a table with 10 legs, a balanced approach provides Naval Aviation with a higher probability

of success. All of the elements contribute, yet no single element requires perfect execution to achieve the ultimate goal.

Balance includes affordable avionics systems which are lighter, smaller, less complex and possess greater functionality. Naval Aviation will field dual-use systems that can

adapt to emerging communication, navigational, safety and computing concepts, and that promote safe and efficient flight in Department of Defense, U.S. civil and international air space.

In the next century, the speed and thoroughness with which accurate information is collected, analyzed

*continued on page 25*



PHC Roger W. Dellinger

*Most U.S. Navy ships have the capability to support air operations and all naval vessels can be serviced by helicopters.*



CH-46 Sea Knight

SH-60B Seahawk



PHAN Neil H. F. Sheinbaum



PH2 Ken Home

C-2A Greyhound

## *Sea-based Air*

**U**.S. Naval Aviation is a multifaceted and versatile warfighting team, consisting of Navy and Marine Corps personnel, aircraft, organizations and facilities. Operating from sea and shore bases, Navy and Marine Corps aviation units perform a wide range of missions throughout the world. In combination with cruise missile-equipped ships and submarines and the ground combat and combat service support elements of Marine Air-Ground Task Forces, Naval Aviation can project decisive, dominant military power from the sea.



MH-53E Sea Dragon

ES-3A Shadow



E-2C Hawkeye



S-3B Viking



***B**y its very nature, sea-based aviation allows the nation's leaders to react to events in a measured but militarily significant manner, increasing or decreasing the weight of their presence as events ashore dictate.*

LCdr. Mike Harrison

F/A-18 Hornet



Lt. Bryan Fetter



Ted Carlson

EA-6B Prowler



F-14D Tomcat

## Marine Air

***F**irst to fight. This is more than just a Marine Corps recruiting slogan—this is the legacy of the United States naval services. For over 220 years, this nation has learned that it can look to the Navy and Marine Corps team to provide an on-the-scene, forward-deployed, sea-based combined arms force to maintain the peace and, when necessary, to win our nation's battles.*



AV-8B Harrier



F/A-18 Hornet

Capt. Christopher L. Koelzer

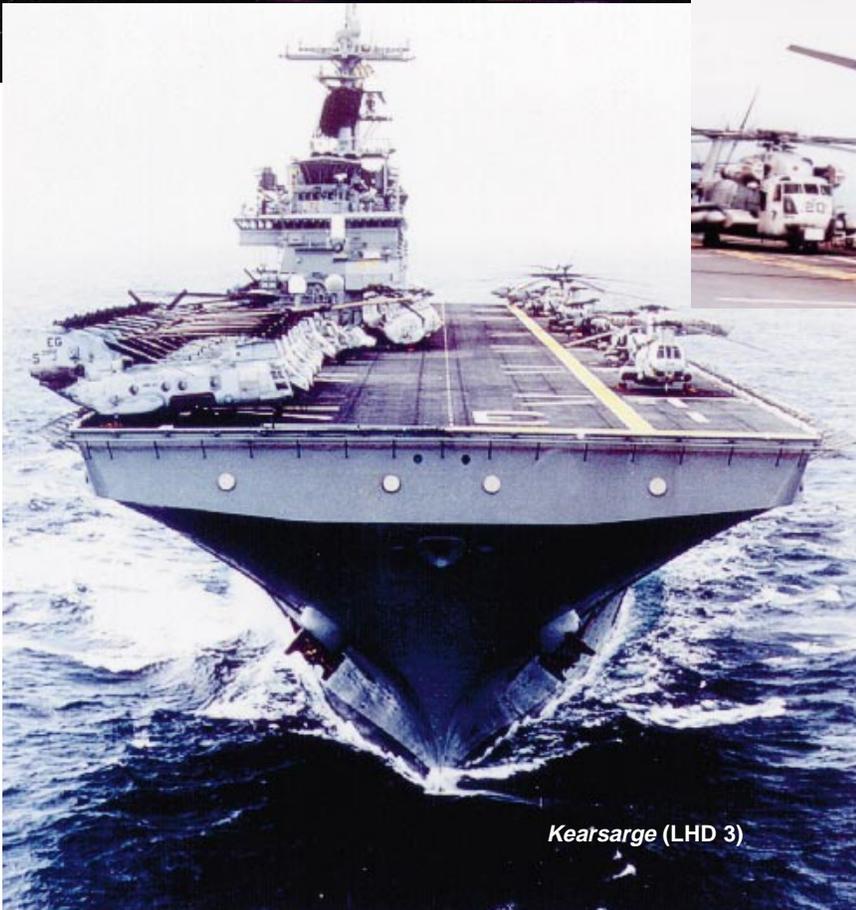


AH-1W Super Cobra



CH-53E Super Stallion

PHAA Jason Jacobowitz



Kearsarge (LHD 3)



P-3C Orion



EP-3E Aries II



C-130 Hercules



E-6B Mercury

## Multimission Maritime, Support and Training Aircraft

**W**ithin Naval Aviation, the Navy possesses a large and varied force of combat and support aircraft. Whether sea- or land-based, the Naval Aviation communities and their aircraft are key elements in the service's ability to achieve its operational and tactical objectives.

**A** well trained force is the major contributor to readiness. Naval Aviation produces the finest Naval Aviators, Naval Flight Officers, enlisted and support personnel in the world.

and protected will be increasingly important. With its current and planned systems, Naval Aviation provides a balanced command, control and sensor architecture to shape joint operations, as well as the airborne platforms to support them.

Finally, balance means pursuing the right mix of low observability, countermeasures, threat avoidance, tactics, and standoff weapons.

There is no one technology or attribute that can meet all mission requirements. Taking a balanced approach will allow Naval Aviation to fulfill its mission requirements even when one element has a diminished effectiveness due to an enemy's capabilities.

This balanced systems approach to improvement will ensure that Naval Aviation continues to respond



T-34C Turbo-Mentor

Ensign David A. Kirk



T-45A Goshawk

Wendy Kaippi

rapidly, credibly and with flexibility to all future contingencies.

## On the Horizon

During the cold war, from 1946 through 1989, the Navy-Marine Corps team responded to some 190 crises, about one crisis-response operation every 11 weeks. In roughly 80 percent of these situations, the

focus of the U.S. response was an aircraft carrier battle group, an amphibious ready group, Marine Corps aviation, or land-based naval air power. In the 1990–1997 period, the Navy and Marine Corps have been called upon to respond to crises and combat in over 75 instances, or one crisis response every three and a half weeks—more than three times the cold war rate. Again, Naval Aviation played a central role in most of these cases.

In the next century, the only certainty is that the geopolitical climate will continue to evolve, and Naval Aviation must stand ready to provide credible deterrence and precise maritime power projection that will enable us to defeat any threat. The Naval Aviation Vision will guide us in making near-, mid- and long-term decisions that will enable us to remain the flexible, mobile and forward-deployed centerpiece of American military power. ✈️

The publication *Naval Aviation . . . Forward Air Power . . . From the Sea* is being distributed to all Naval Aviation squadrons, bases, ships and headquarters. To obtain additional copies, write to: Chief of Naval Operations (N88WB), 2000 Navy Pentagon, Room 4E367, Washington, D.C. 20350-2000.



F/A-18E Super Hornet

## The Future

**N**aval Aviation's future will build upon a heritage of innovation and tactical and operational excellence. From the next-generation aircraft carrier, to advanced multi-mission aircraft such as the Joint Strike Fighter and the Common Support Aircraft, to tilt-rotor aircraft, Naval Aviation's Vision is one of adaptation, evolution and success.



T-6A Texan II



MV-22 Osprey

Boeing Defense & Space Group



JSF concept



JSF concept

Lockheed Martin

Morgan Wilbur/Naval Aviation News



CVX concept

**O**ver the next decade and a half, the Navy will make the transition from today's *Nimitz*-class carriers to a new carrier class that builds upon new technologies and concepts. The ships of this class, currently called CVX, will be in service well past the midpoint of the 21st century.