FRCs Gets Hornets Back in Action Quickly, Now Turning Attention to Other Aircraft

An F/A-18 Hornet assigned to the Gladiators of Strike Fighter Attack Squadron (VFA) 106 prepares to launch from the flight deck of the aircraft carrier USS Theodore Roosevelt (CVN 71) in this 2014 photo. *U.S. NAVY*

NATIONAL HARBOR, Md. – Intense and extended efforts by the command of naval aviation's Fleet Readiness Centers have cut the time to get F/A-18 Hornet fighters out of maintenance and back to the flight line by half.

Those efforts are now are being used to do the same with other Navy aircraft, and to reduce the cost of those updates and maintenance, officials at the command said Aug. 3.

The series of reforms to accelerate the turn-around of aircraft were driven by the chronic shortfall of tactical planes, particularly fighter jets, a decade ago. The program also stemmed from the revised National Defense Strategy, which turned the military's focus to the return of great power competition due to rising threats from China and Russia, Rear Adm. Joseph Hornbuckle, Fleet Readiness Centers commander, told a Navy League Sea-Air-Space 2021 briefing.

The initial effort was focused on the F/A-18, the key to the carrier air wings' strike capabilities. By applying industry best practices, largely copied from the airlines, FRCs were able to cut the typical 120 to 150 day average turnaround time in half, said Roy Harris, the command's executive director.

The command established an operations center that looked at all elements of FRC's operations and prioritized allocation of resources, Harris said. A key element of the reforms was

setting targets for the centers to meet important milestones in the repair and maintenance process and pushing the centers to meet those goals, Hornbuckle said.

One of its early achievements was meeting the chief of naval operations' goal of putting 341 mission-capable Hornets on the flight line. The effort then turned to the EF-18G Growler electronic warfare aircraft and now is extending to other Navy aircraft, including E-2C Hawkeyes and H-60 helicopters.

The reform efforts now are focusing not only on producing "mission-capable aircraft quicker, but also at the lowest possible cost," Hornbuckle said.

FRC operates nine readiness centers and 25 other tenant sites and employs nearly 22,000 individuals, Navy, civilians and contractors, Hornbuckle said. It annually works on 300 aircraft and 150,000 aviation components.

As with most naval systems, a major problem for FRC is fighting corrosion, which "can eat our lunch," Harris said. They are working to collect data on the problem to find the most effective and efficient solutions.

Coast Guard Sees Many Uses for Unmanned Systems in the Arctic Environment

Coast Guard Cutter Healy deckhands prepare to lower an unmanned underwater vehicle, operated by the Woods Hole Oceanographic Institute, into the Beaufort Sea during a simulated spilled oil response and recovery exercise, Sept.

10, 2013. WHOI scientists used the UUV to monitor ice conditions from below during the simulated exercise. *U.S. COAST GUARD* / Petty Officer 3rd Class Grant DeVuyst

NATIONAL HARBOR, Md. — First sought to extend the reach of Coast Guard cutters in the Pacific Ocean, the service is exploring the use of unmanned aerial, surface, and undersea systems in the harsh and distant environs of the Arctic.

“Numerous types of platforms could be extremely valuable in the Arctic,” U.S. Coast Guard Capt. Thom Remmers told a, exposition floor briefing Aug. 2 at the Navy League’s Sea-Air-Space expo in National Harbor, Maryland.

Remmers, the Unmanned Cross-Functional team lead for the Coast Guard’s Directorate for Capabilities (CG-7), said underwater vehicles could “very easily and capably look for environmental spills.”

The Coast Guard partnered with Woods Hole Oceanographic Institution in Massachusetts to operate a 250-lb. long-range autonomous underwater vehicle (LRAUV), Polaris, developed by the institute for just purpose, he said. “It demonstrated a search for oil spills under the ice in the Arctic,” he added.

Remmers said the Coast Guard has also deployed unmanned aerial vehicles on some icebreakers, like the Coast Guard Cutter Healy, “primarily by tactical commanders to look for ice floes,” he added.

“Those types of needs are not unique to the Arctic,” Remmers said, “but they’re much more valuable when you start looking at access in that region.” Unmanned systems could also provide “a long-range persistent MDA [maritime domain awareness] type of capability that we need up there,” he said.

Emerging Capabilities Like Unmanned and AI Can Aid Cyber Threat

Capt. Jeff Morganthaler, Maritime Operations Center director at the Navy Expeditionary Combat Command, speaks at The Future of Naval Expeditionary Warfare in All-Domain Operations panel. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. – The challenge for naval expeditionary forces in the emerging threat environment is how to integrate all the elements operating in a distributed role when they may not be able to control the communications domain, a panel of experts said Tuesday. All the challenges of mobility, survivability and combat effectiveness in distributed expeditionary operations are aggravated by the threat of cyberspace interference, the panel told a Navy League Sea-Air-Space forum.

"We've been talking about distributed ops for a long time," but doing that in a large geographic area "introduces serious challenges to our architecture on how we knit that together, particularly in a distributed environment where we may not control the spectrum. … We may not control the cyberspace environment," said Gregory Breazile, a retired Marine colonel, now CEO of Breazile Cyber & C4I Solutions. "We want to dominate, but we have to work through that competitive space," and it becomes more complicated, Breazile said.

But industry is working to bring capabilities, including artificial intelligence, that can help overcome those challenges, Breazile said. The good news, he said, "is that AI is making it able to bring things together. … All these AI capabilities are there."

Navy Capt. Jeff Morganthaler, Maritime Operations Center

director at the Navy Expeditionary Combat Command (NECC), and Col. David Odom, director Expeditionary Warfare on the Navy staff, also cited the emerging capabilities, including artificial intelligence and unmanned systems, that can ensure the integrated, multi-domain operations they are working to achieve.

Morganthaler listed the ability to supply integrated information and communications systems among the capabilities that NECC brings to the integrated expeditionary operations. In talking about assured command and control, "I'm confident of what we have today." But for the future, "I don't need it bigger. I need it smaller and more capable." He described a proposed communications and intelligence system that could be flown in on a MV-22 Osprey and mounted on an unmanned vehicle.

Among the other advances the expeditionary forces need, Odom mentioned bringing the fifth-generation F-35 capabilities to the big-deck amphibious ships, the less expensive but capable LPD Flight II amphibs and the proposed light amphibious ships. The challenge for the smaller amphibs, he said, is to make them "affordable, so we can get as many as possible. We are working with industry to bring what we need."

Navy's Triton UAV's IFC-4 Sensors, Systems 'Performing Better Than Expected'

A MQ-4C Triton taxis at Andersen Air Force Base. U.S. AIR FORCE / Senior Airman Michael S. Murphy

National Harbor, Md. – The mission systems on the first MQ-4C

Triton unmanned aerial vehicle (UAV) equipped with a signals intelligence capability functioned well on the first test flight, a Navy official said.

The first MQ-4C equipped with Integrated Functional Capability-Four (IFC-4) made its first flight on July 29, mainly to test the aerodynamic characteristics of the new configuration. The test team, while evaluating such aspects as stability and control, also checked out the performance of the mission systems and sensors. The IFC Triton featured more antennas than the baseline IFC version.

“The sensors and systems are performing better than expected,” said Capt. Dan Mackin, the Navy’s Persistent Maritime Unmanned Aircraft Systems program manager, speaking Aug. 3 at the Navy League’s Sea-Air-Space expo at National Harbor, Maryland.

The IFC-4 hardware and software configuration introduces a signals intelligence capability to the Triton. It will enable the Triton to become an integral part of the Navy’s Maritime Intelligence, Surveillance, Reconnaissance and Targeting (MISR&T) transition plan. As such, it will eventually replace the Navy’s EP-3E Orion electronic reconnaissance aircraft beginning in the fall of 2023 when the first full orbit is established. The IFC-4 upgrade also includes the Minotaur mission system now used on the EP-3E.

Mackin said the Navy expects to introduce artificial intelligence and machine learning capabilities during later upgrades. Other upgrades planned for 2025 include Wideband Tactical Targeting Network Technology, enhanced radar identification modes, protected satellite communications. M-Code and counter-electronic attack.

Upgrades planned for 2027-2028 include enhancements to enable the Triton to perform without access to the GPS and satellite communications. These include command from afloat units, more robust navigation and communications, increased power, among

others.

Mackin said that when the IFC-4 configuration joins the fleet, the mission control centers will be modified with special compartmented intelligence facilities for protection of intelligence and its sources and methods.

The Royal Australian Air Force (RAAF) is partnered with the U.S. Navy on the Triton program and has accelerated its acquisition of three MQ-4Cs to keep the production line going during the U.S. gap in production, said Doug Shaffer, Northrop Grumman's' Triton program manager.

Mackin said the RAAF Tritons will be in the IFC-4 configuration and will be identical to those of the U.S. Navy.

Diversity Helps Foster Warfighting Readiness, Panelists Say

Marine Corps Brig. Gen. A.T. Williamson, right, says the service is modernizing how it manages and recruits talent. *NAVY LEAGUE / Lisa Nipp*

Less than 30% of youth today are available for military service, said Michelle Godfrey, senior advisor for diversity and inclusion, U.S. Coast Guard. As the nation becomes more diverse, one of the keys to attracting and retaining that scarce talent is to foster equity and inclusion efforts, said Godfrey and other panelists during the Aug. 3 session on Inclusion and Diversity as a Force Multiplier.

"The data backs it up – the more diverse team you have, the

higher your performance," Godfrey said.

In the Navy, diversity, equity and inclusion (DEI) efforts help foster warfighting readiness, said Vice Adm. John Nowell Jr., deputy chief of naval operations for manpower, personnel, training and education and chief of naval personnel.

"If you want to outfight the enemy, you have to outthink them, and the way you do that is by leveraging diverse and inclusive leadership," he said.

Nowell said the Navy is currently implementing 56 recommendations from a DEI task force. For instance, recruiters now look at applicants' whole personality rather than just quantifiable measures like SATs. Navy leader trainer development is taking DEI into account and is looking at bias in terms of decision science. Navy classrooms are also using a bias mitigation tool. The key, Nowell said, is to use data analytics while still being able to rely on intuition as well.

The Marine Corps is modernizing its manpower system, including talent management, said

Brig. Gen. A.T. Williamson, director, Manpower Plans & Policy Division, U.S. Marine Corps. Along with ethnic inclusivity, diversity of thought, experience and background also helps build a cohort of inclusive teams, he said.

The Marine Corps is currently working on and vetting a DEI framework, Williamson said. It's also conducting a survey to see if there's bias within the personnel evaluation system, and asking questions about inclusion during exit surveys.

The Coast Guard has a DEI action plan with 36 distinct actions, Godfrey said. The organization has completed a women's retention study and expects a study to be published this month on recruitment and retention of underrepresented minorities. In April, the Coast Guard deployed a virtual mentoring program that helps foster DEI efforts. Close to

1,000 people have signed up for the program’s mentoring app, she said.

The Coast Guard also offers tools on how to have DEI conversations, Godfrey said. It’s trained more than 100 diversity and inclusion change agents, who offer coaching for various DEI situations. Performance appraisals also include diversity and inclusion competency.

The Department of the Navy has exceeded its social and economic DEI goals for the past six years, said Jimmy Smith, director, Office of Small Business Programs, Department of the Navy. During the last fiscal year, it spent $17.3 billion on small businesses that were in diverse socioeconomic categories, he said. It’s also working with historically black colleges and universities on recruitment efforts.

“We’re fighting to attract talent,” Smith said. “We’re spending money in places we haven’t before.”

In terms of equity, only some companies can perform jobs like shipbuilding, Smith pointed out. But the Department of the Navy is committed to doing a better job of enforcing how those companies are distributing funding to their subcontractors.

“We need to change our bias from always going to certain places to get certain things done,” he said. “We need to create more competition. At the end of the day, it’s all about fairness.”

All of the speakers emphasized that DEI efforts encompass more than just race, religion, age and sexuality. They also include factors like inclusivity of education and viewpoints, and diversity of thought and problem-solving.

Smith believes DEI initiatives should be deeply personal as well. “Being a father of three girls, there are things women in our workforce go through today that I never want to see my girls ever have to go through,” he said.

US Facing ‘Pearl Harbor Moment’ From Cyber Attacks, Vice Adm. Trussler Says

Vice Adm. Jeffrey Trussler says cyber attacks are something that now threaten every American. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. — Vice Adm. Jeffrey Trussler, deputy chief of naval operations for information warfare and director of naval intelligence, said cybersecurity threats to the United States are such that “frankly, where we sit today in 2021, we ought to be having one of those Pearl Harbor moments without the Pearl Harbor.”

Trussler spoke on a panel at Sea-Air-Space 2021 panel on “Cyber Today’s Fight, Tomorrows Capabilities,” along with Rear Adm. Michael Ryan, commander of U.S. Coast Guard Cyber Command, Karen Van Dyke, director for positioning, navigation, and timing and spectrum management at the Department of Transportation, and Ryan Roberts, senior manager of cyber and strategic risk at Deloitte.

Trussler said cyber attacks — such as the one that disabled the Colonial Pipeline, affecting the flow of oil along the East Coast and Southeast — shows that the threat is no longer just about defense and security, but “you could be impacted personally from anywhere around the world, based on our dependency on technology … I’m worried that enough people aren’t hearing, wow, it’s a new world.”

Ryan said the Coast Guard is issuing an update to its Cyber Strategic Outlook and wants to embrace innovation on the cybersecurity front, which is where industry can help.

“We understand the value of partnerships, particularly with those in the room,” he said.

Van Dyke said from her point of view, a big fear is the jamming and spoofing of Global Positioning System signals.

“It’s a weak signal coming from space,” she said of GPS, and “it doesn’t take much power to jam GPS over a wide area.”

Jamming is a temporary threat, but spoofing can actually permanently disrupt communications, as a GPS user might lose access to their receiver for good.

“This is an increasing concern,” Van Dyke said, and DoT is working with the Department of Defense to counter these and other threats.

Roberts said automation will take on a larger role when responding to future cyber attacks, as eventually humans will be too slow.

If a major attack happens “and we convene a committee to decide what we’re going to do, we’ve already lost,” he said. “Over time, we’re going to have to remove that human in the loop and get to autonomous decision making.” It’s a scary thought, but “humans are not going to be able to respond quickly enough.”

Interagency cooperation is key to fighting cyber attacks, the panelists said. Trussler said he learned new things just by being on the panel, and said “Sea-Air-Space has done a really good job” in bringing together different viewpoints.

Ryan said the Coast Guard is already working with commercia shipping ports to assess their facilities so they can harden their infrastructure.

That’s a niche area for the service, he said, “but reflective of the fact this is a joint fight.”

Official: Navy Opposed to More Super Hornets Because Aircraft May Not Be Viable in 2050s

Rear Adm. Andrew Loiselle, third from left, spoke on an aviation panel on Aug. 3. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. — A top Navy air warfare official said Aug. 3 the service opposes the addition of F/A-18E/F Super Hornets to the budget — which Congress wants to do this year as it done in many previous budgets — because the new buys would take the aircraft deep into the 2050s, when it would be no longer viable.

As they have done for years, lawmakers are once again seeking to add more F/A-18E/F Super Hornets to the Department of Defense's budget to help close a gap in strike fighter capability. Chief of Naval Operations Adm. Michael Gilday said Aug. 2 at the Navy League's Sea-Air-Space 2021 the Navy is opposed to this move, and the next day Rear Adm. Andrew Loiselle, director of the air warfare division (N98), said Gilday opposes it because the Navy doesn't want fourth-generation fighters that many years into the future.

He pointed out that the last Super Hornet to be bought under this proposal would last 30 years, which "takes us out to 2055. There isn't a lot of analysis out there that supports fourth-generation viability" that far into the future, Loiselle said.

Instead, the Navy is focused on continuing F-35 buys and

managing the service lives for current Super Hornets, he said.

Additionally, Loiselle addressed what he described as incorrect interpretations that the Navy is reducing its F-35 program of record by decreasing the number of F-35s in an air wing to 14.

“Some interpreted that as a reduction in the program of record,” he said. “That is not the case. There has been no change to the program of record for the F-35.”

Chebi Nominated for NAVAIR Commander, Bierman for III MEF

ARLINGTON, Va. – Secretary of Defense Lloyd J. Austin III announced Aug. 2 that the president has made the following nominations:

Navy Rear Adm. Carl P. Chebi for appointment to the rank of vice admiral, and assignment as commander, Naval Air Systems Command, Patuxent River, Maryland. Chebi is currently serving as deputy director, Joint Strike Fighter Program, Office of the Secretary of Defense, Arlington, Virginia.

Marine Corps Maj. Gen. James W. Bierman Jr. for appointment to the rank of lieutenant general, and assignment as commanding general, III Marine Expeditionary Force, Okinawa, Japan. Bierman is currently serving as commanding general, 3d Marine Division, Okinawa, Japan.

Below is Chebi’s official biography from the Navy’s website:

Rear Adm. Carl Chebi, a native of Holliston, Massachusetts. He earned a Bachelor of Science in Computer Systems Engineering and a commission as an ensign from the Naval Reserve Officer Training Corps at Rensselaer Polytechnic Institute. He is a graduate of the U.S. Naval Test Pilot School and Navy Fighter Weapons School, and he holds an Executive Master in Business Administration from the Naval Postgraduate School.

Chebi served operationally as an F-14 pilot in Fighter Squadron (VF) 142 deployed with USS Eisenhower (CVN 69) and executive officer and commanding officer for Strike Fighter Squadron (VFA) 192 deployed with USS Kitty Hawk (CV 63) to Atsugi, Japan. During these tours he participated in Operation Southern Watch and many Western Pacific deployments.

His shore tours include service as an aircraft and weapons test pilot in both Air Test and Evaluation Squadron (VX) 23 and 30 and as deputy for Strike Aircraft Plans and Requirements for the Office of the Chief of Naval Operations (OPNAV). Chebi also completed numerous acquisition tours beginning with the U.S. Naval Test Pilot School, where he was selected to fly the Mirage 2000 aircraft in France. His program management experience includes serving as a deputy program manager for the F/A-18 and EA-18G Program Office (PMA-265), program manager for the Precision Strike Weapons Program Office (PMA- 201), and program manager for Naval Integrated Fires Program (PMA-298). He also served as the vice commander of Naval Air Systems Command and as the Program Executive Officer Command, Control, Communications, Computers, and Intelligence (C4I)/Program Executive Officer Space Systems.

In September 2019 he assumed duty as the deputy program executive officer, F-35 Lightning II Joint Program Office.

Chebi has 3,700 plus flight hours and more than 700 carrier arrested landings. He has logged hours in the F/A- 18 A-F,

Mirage 2000, F-14A-D, F-15, F-16, P-51 and numerous other aircraft.

Below is Bierman's official biography:

Maj. Gen. James W. Bierman Jr. was born in Camp Lejeune and is a graduate from the Virginia Military Institute. He commissioned in the Marine Corps in 1987.

As a company grade officer, Bierman served as a Rifle Platoon Commander, Anti-Armor Platoon Commander, Adjutant, Commanding Officer of Headquarters and Service Company, Intelligence Officer, and Company Commander of Charlie Company 1st Battalion, 1st Marines. He deployed in support of contingency operations in the Persian Gulf to the Mediterranean, participated in operations in Northern Iraq as part of Operation Provide Comfort, and supported operations in Somalia.

As a field grade officer, Bierman served as a battalion operations officer in 1st Battalion, 1st Marines, as the commanding officer of Recruiting Station Richmond, a planner for I Marine Expeditionary Force and Deputy G-3, Future Operations Officer. In 2003, he became the commanding officer of 1st Battalion, 3d Marines. He deployed numerous times in support of Operation Iraqi Freedom, Operation Iraqi Freedom II, and Operation Enduring Freedom VI-VII. In April 2009, Bierman assumed command of 3d Marine Regiment. From 2011 to 2013, he served as the military secretary to the Commandant of the Marine Corps.

As a general officer, Bierman commanded the Marine Corps Recruit Depot, San Diego and the Western Recruiting Region from 2013 to 2016. In September 2016 he assumed his duties as the deputy director for political-military affairs for the Middle East, Strategic Plans and Policy Direction (J5), on the Joint Staff. In 2018 Bierman assumed his duties as the commanding general of Marine Corps Recruiting Command. He is a

graduate of The Basic School, Infantry Officer Course, Amphibious Warfare School, Command and Staff College, School of Advanced Warfighting, and College of Naval Warfare.

Newport News Shipbuilding Progresses Construction Activities on John F. Kennedy

Newport News Shipbuilding division is progressing through construction of the aircraft carrier John F. Kennedy (CVN 79) turning over more than 500 of the total 2,615 compartments, including the machine room, which is one of the larger spaces. The completed spaces allow Sailors to begin training on the ship while final outfitting and testing continues. *HUNTINGTON INGALLS INDUSTRIES*

NEWPORT NEWS, Va. – Huntington Ingalls Industries announced Aug. 2 that it is making significant progress in the compartment and systems construction of the aircraft carrier John F. Kennedy (CVN 79).

Newport News Shipbuilding division recently eclipsed the 20% mark on compartment completion, turning over to the ship's crew more than 500 of the total 2,615 spaces. It also has installed more than 8 million feet of cable – or more than 1,500 miles – of the approximately 10.5 million feet of cable on Kennedy.

The most recently completed spaces include berthing, machinery and electrical. This allows Sailors assigned to the pre-commissioning unit to continue training on the ship while final outfitting and testing progresses.

“We are pleased with the progress being made on Kennedy,” said Lucas Hicks, vice president of the Gerald R. Ford (CVN 78) and John F. Kennedy (CVN 79) aircraft carrier programs. “We are in the very early stages of systems testing and look forward to successfully executing our work on equipment, systems and compartments that brings us closer to delivering the ship to the fleet.”

Kennedy is more than 80% complete overall and is scheduled to be delivered to the Navy in 2024.

BAE Systems’ Next-Generation APKWS Guidance Kits Improve Rocket Range and Impact

BAE Systems has developed an advanced, hardened version of its APKWS guidance kit. *BAE SYSTEMS*

Hudson, N.H. – BAE Systems, Inc. has developed an advanced version of its combat-proven APKWS guidance kit that offers enhanced strike distance and precision strike lethality, the company said in an Aug. 2 release. The upgrade improves the effective range of APKWS guided rockets by up to 30%, allowing warfighters to engage targets from a greater standoff distance with improved survivability.

APKWS is the U.S. government’s only program of record for guiding 2.75-inch laser-guided rockets, providing an efficient, low-cost weapon in the U.S. arsenal of precision munitions. Initial production of APKWS block upgrade guidance kits will start in the third quarter of 2021.

“Our customers’ precision strike needs are changing,” said John Watkins, vice president and general manager of Precision Strike & Sensing Solutions at BAE Systems. “We’re focused on evolving APKWS guidance kits to provide them with a more capable low-cost product that’s easy to use and known for its accuracy.”

APKWS block upgrade guidance kits create an optimized flight trajectory that enables the rocket to engage targets at a steeper angle of attack, providing improvements in range and lethality. The optimized attack trajectory improves first-shot success against stationary and moving targets.

The enhanced guidance kits also provide logistics and training benefits to customers. A single variant of the weapon is now qualified for rotary-wing and fixed-wing aircraft across the U.S. armed forces customers, easing stock management and reducing the cognitive load on pilots. An upgrade to the surface danger zone logic also provides better training range options in certain conditions, allowing crews to improve their proficiency at home stations.

BAE Systems’ APKWS guidance kits are manufactured at the company’s production facility in Hudson, New Hampshire.