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What combat readiness looks like when deployed

By MC2 Ronald Kuzlik, Commander, Naval Air Force Reserve Public Affairs

This article, submitted by Commander, Naval Air Forces, tells us how the reservists of VAW-77 thwarted drug smuggling operations in South America and the Caribbean Sea, and provided assistance to civilians in distress. But it's also a testament to the Naval Aviation Enterprise's (NAE) delivery of combat-ready forces to the fleet and how other U.S. and

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Enter the 2012 DoN CPI Project Competition

Do you have a project that increased readiness in your command? Did you create a solution that can be replicated in other activities? Did your project yield impressive energy or financial savings? You can share your successes with others in the Navy by entering the 2012 DoN Continuous Process Improvement (CPI) Project Competition.

The Maintenance and Supply Integration Performance Improvement Branch (PIB) is seeking submissions from the fleet for this event. **PLEASE NOTE: THE SUBMISSION CRITERION AND PROCESS HAVE CHANGED FOR 2012.** Nominations must be submitted by March 9 to their higher-level commands using this submission form (link is CAC-enabled); Storyboards will be designed AFTER a panel selects the winning

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Time, Tires and Training

NAS Oceana shows NAE leadership how three levels of maintenance use CPI

By Jacquelyn Millham, NAE Current Readiness CFT/Enterprise AIRSpeed Public Affairs

Thirty-eight percent.

That's how much time Naval Aviation Logistics Command Management Information System (NALCOMIS) showed maintainers in the Consolidated Automated Support System (CASS) Shop at Naval Air Station (NAS) Oceana actually spent working on equipment during duty hours.

"A lack of time was a common complaint," said Aviation Electronics Technician 2nd Class (AT2) Jeff Stewart, CASS Shop production supervisor, to Naval Aviation Enterprise (NAE) leadership. "We had to figure out how to find more time for maintenance."

"At first, we pulled the data from NALCOMIS and we didn't believe the numbers," said AT2 Richard Walsh, Fleet Readiness Center Mid-Atlantic Oceana Site Implementation Team leading petty officer (LPO). "We thought it had to be wrong." So to validate the numbers, the AIR*Speed* Team conducted a measurement system analysis by having Sailors in the work center track their hours the old-fashion way – using paper and pen.

And the documentation showed maintainers were spending only 38 percent of their time working on components – validating the NALCOMIS data.

So the AIR*Speed* team initiated the Human Capital Project which restructures maintainers' working hours. Production time was consolidated into two shifts that provided 12 hours of continuous maintenance; administrative tasks were scheduled during the beginning and end of the day. The work center also began to cross-train its personnel, updated its high/low consumable items, scrubbed its Individual Component Repair List and updated it.

Throughput doubled. The work center's continuous production time increased from 546 minutes per day to more than 800 minutes per day, its time-to-reliably replenish (TRR) was reduced by more than 89 percent, its backlog decreased by 92 percent and expeditious repairs (EXREPS) were eliminated.

The CASS Shop was one of several work centers spotlighted during "Boots-on-the-Ground" (BoG) hosted by Naval Air Station Oceana Nov. 9. Rear Adm. Ted Branch, Commander, Naval Air Force Atlantic and NAE Current Readiness Cross-functional Team co-lead; Rear Adm. Jeffrey Penfield, Commander, Fleet Readiness Centers (FRC), Naval Air Systems Command; and then Rear Adm. (sel.) John King, Commander, NAVSUP Weapons Systems Support and NAE Maintenance and Supply Chain Management Team co-lead, led the site visit. (Editors' note: Rear Adm. John King was frocked in late 2011) Representatives from Commander, Naval Air Force Atlantic; Marine Forces Command Pacific; Defense Logistics Agency; Headquarters Marine Corps, Aviation Logistics Support Branch; Center for Naval Aviation Technical Training; Program Executive Officer, Strike Weapons and Unmanned Aviation; Chief of Naval Air Training; Commander, Strike Fighter Wing Pacific; Commander, Strike Fighter Wing Atlantic; USS Theodore Roosevelt (CVN-71); and contractor support attended the event.

The Human Capital Project was also applied to the F/A-18 Radar Shop. Data showed maintainers were spending only 50 minutes per shift per day repairing components. By consolidating with CASS work stations, partnering with FRC West to cross-train maintainers, ordering parts after a component completed its entire test

(Oceana continued on Page 8)

Logistics Specialist 1st Class Michael Clark, VFA-32 Material Control Tool Room lead petty officer, describes the improvements made to his area to then Rear Adm. (sel.) John King, Commander, NAVSUP Weapons System Support (center), and to Boots-on-the-Ground attendees.

Keith Whittington

Putting Sailors and Marines first

Being recognized for Fleet Readiness Center Mid-Atlantic (FRCMA) Site Oceana's continuous process improvement (CPI) successes was an honor for Keith Whittington, but one he felt must be shared with others.

"My job is to provide mentorship, independent review and approve phases," said the FRCMA integrated product team (IPT) lead.

"The petty officers and the Marines do all of the work. I just discuss their ideas with them. After FRCMA leadership is briefed on the project, the maintainers in the work centers take ownership of it and tailor it to their areas.

"I'm just the guy who reports and make sure it's sustained."

Whittington was recognized with the Naval Aviation Enterprise Site Visit Excellence Award during the "Boots-on-the-Ground" site visit Nov. 9 for his collaborative work that resulted in improved throughput and quality of work life in his command.

Other duties as assigned

One of the notable improvements was the reduction of the Consolidated Automated Support System (CASS) Shop's work in progress (WIP) by more than 45 percent. Before the AIR*Speed* Team applied CPI to the CASS Shop, it did not have a standardized process to assign priority to its work. Maintainers were constantly working on expeditious repairs. Time, they said, was what they needed most to facilitate the repair of components.

"We believe that the most important thing a Sailor has to do is production. But we also know they have to do other things beside production. We sought to understand that through the Human Capital Project." said Whittington.

" When we looked at everything else they had to do – [physical readiness testing], doctor's appointments, collateral duty training , plus any personal activities, we found out just how much it was impacting the time they had available to work," he said.

Only 38 percent of their available work hours were spent on maintenance.

The success of the initial solution – dedicating three hours for administrative tasks in exchange for five hours of dedicated maintenance time – was impacted by other factors.

"While it made a marked improvement in that work center, we found that it had limitations," said Whittington. "So we revised the work schedule from three to two shifts. As other work centers applied it, we also found that we couldn't just do it at that level because of the different meetings and training the maintainers had to attend. It had to be applied at the division and command level as well for it to be

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A system approach to readiness takes center stage at MAG- 11

By Jacquelyn Millham, NAE Current Readiness CFT/Enterprise AIRSpeed Public Affairs

Organizational-level (O-level) initiatives took center stage as Marine Aviation Logistics Squadron (MALS) 11 and Marine Fighter Attack Training Squadron (VMFAT) 101 showcased their process improvement accomplishments and discussed future readiness challenges with Naval Aviation Enterprise (NAE) leadership during "Boot-on-the-Ground" hosted by Marine Aircraft Group (MAG) 11 Oct. 27.

Sharing information

By raising the awareness and skill sets of O-level maintainers, Marine Air Group (MAG) and Fleet Readiness Center Southwest (FRCSW) are currently collaborating to improve the material condition of aircraft before they are inducted for depot-level maintenance. "This partnership not only exemplifies the principles of the NAE, but also has the potential to increase readiness, said Col. John Jansen, MAG-11 commanding officer.

"Aircraft at MAG-11 have six demand signals on them. Unscheduled depot-level maintenance on an aircraft lengthens the time it is OOR [out of reporting] and the sortie schedule shifts onto other aircraft.

"When an aircraft is returned to the squadron, it comes with an Acceptance Letter that lists what repairs were performed at the depot and all the O-level maintenance that was supposed to be performed while it was at the squadron. Issues that are not corrected or given attention before induction drive the number of days an aircraft is OOR and not on the flight line.

"That information is given to the maintainers and it improves the transparency of the process. It's a revelation for some," he said.

Sharing information on the material condition of aircraft will increasingly become important as the F/A-18 A-D sundowns, he added.

"I'm excited about this," said Navy Capt. John Smajdek, FRCSW commanding officer. "We are having maintainers come down to FRCSW to see and participate in the Evaluation Estimation process (a survey of the aircraft that scopes the work to be performed). They also get training on the fuel cell issues and replacement of the center barrel."

VMFAT-101, a MAG-11 subordinate command, is currently undergoing End-to-End (E2E) implementation.

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> ~ Col. John Jansen,
> MAG-11 Commanding Officer

Jansen said E2E would aggregate MAG-11 and FRCSW's collaborative work and baseline process risk. "As we go through the last chapter of the F/A-18 A-D's life cycle, leadership will have a better understanding of how to better apply resources in a manner that is not iterant and endures over time." Jansen said.

No longer business as usual

The goal of the system at VMFAT-101, said Chief Warrant Officer Rob Willis, E2E lead, is the production of pilots. Data showed meeting this requirement was a challenge for the squadron and that it would continue to be in future years as the pilot training requirement increased.

One of the first steps in analyzing the system was validating the pilot syllabus. The team gathered input from the customers – flight line squadrons – and asked them to assess pilot skills and identify deficiencies.

The syllabus, they learned, was sound and only needed minor changes. Other analyses, which focused on the variability associated with planning, scheduling and execution of the syllabus, showed aircraft was the major constraint (as VMFAT -101 maintains four different variations of F/A-18s for training) and that system behaviors negatively affected throughput.

Through E2E, the squadron made a major paradigm shift, from one based on consumption to one based on demand and developed a new metric to measure throughput: Ready Student Aircraft (RSA).

Operations Officer Maj. Charles Schwarm said that the E2E process was transformative. "We were burning up our reserve [aircraft]. Now, I'm no longer talking about what maintenance is giving me and flying those aircraft. I am giving them a requirement and they are supplying aircraft to meet it. Our planned jet flow will make our mission in FY 12 and make up FY 11 [throughput] deficits," he said.

He also said the results required patience. "At the operational level, we want to fly all the aircraft that are available. End-to-End may seem to be one step back and two steps forward," said Schwarm. "Be patient. Think about the way ahead. Write

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Staff Sgt. Maynard: Working where the rubber meets the road

By Jacquelyn Millham, NAE Current Readiness CFT/Enterprise AIRSpeed Public Affairs

Staff Sgt. David Maynard was recognized with the Naval Aviation Enterprise Site Visit Excellence Award during "Boots-on-the-Ground" on Oct. 27 for his role in Marine Aviation Logistics Squadron (MALS) 11 Avionics Department's $800,000 cost avoidance in repair and return to service of 38 assets, and for reducing the APG-73 radar transmitter's repair time by 88 percent.

Expertise in the work center

Maynard is a black belt. You won't find him formally assigned to MALS-11's AIR*Speed* team, but working as the Avionics Division radar assistant staff noncommissioned officer, a position, he said, that not only gives him improved visibility into the department's day-in and day-out maintenance processes, but gives him the opportunity to strengthen the culture of continuous process improvement (CPI) in the command.

He earned his accreditation in 2009 from Villanova University just before he left for Iraq. Although Maynard saw opportunities to use his skills during his deployment, the operational tempo demanded most of his time.

After deployment, he returned to MALS-11's Avionics Division. And there, he saw the difference between the two environments. "The division's heavy workload was affecting flight line readiness. We had EXREPS (expeditious repairs) all the time. The maintainers in 600 Division, were trying to figure out what took so long to repair components and why. TRR was 36 days. I wanted to use my skills as a black belt and was interested in participating in fixing the process," he said.

A side-by-side comparison on the APG-73 time on wing (TOW) also caught Maynard's attention. "Data showed [Naval Air Station] Lemoore and MALS-11's TOWs. Theirs was almost twice as long as ours. We see more 73 gear than anyone and I knew our Marines have lots of knowledge. Naval Air Station Lemoore also has Raytheon on site to assist," he said.

A deep-dive analysis showed lots of wasted effort. "Marines were choosing to work the easy and similar fixes first – two to three assets at a time instead of focusing on just one component," said Maynard. "Marines also would work on one component and then put it down because they didn't have [replacement] parts. Then they'd begin to repair another asset. When maintainers got the parts and went back to fix the first component, they wouldn't remember where they left off. We'd have a table filled with parts and no one would know or remember what they were there for."

Marines, he said, were trying to meet their time to reliably replenish (TRR) requirements as best they could. The components that had exceeded their TRR and were still needed by the fleet were an albatross. Maintainers knew that if they focused on repairing those components, they would not be able to fix the ones that required less time, and that the division's TRR would increase.

Leadership decided that the division should start out with a clean slate before implementing changes. "We took one month to fix all of the gripes without caring about TRR. Once we cleared those out, we instituted a policy that the easy, ready-for issue items would not be fixed first, but that the oldest [maintenance action form] must be the first one to leave the work centers.

"Now our gear leaves Avionics one to three days," he said.

(Maynard continued on Page 12)

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foreign government organizations rely on the provision to achieve their national security goals. Although VAW-77 is a small and markedly different squadron than other E-2C squadrons in terms of its mission, weapon systems and its status as a reserve asset, it has a voice thanks to the NAE construct and can bring issues that degrade its readiness to senior leadership. See sidebar, Working behind the scenes in CONUS *on Page 7 to learn more about how the NAE is helping VRC/VAW community address its readiness degraders.*

The "Nightwolves" of Carrier Airborne Warning Squadron (VAW) 77 deployed twice in 2011 to Colombia in support of U.S. Naval Forces Southern Command (SOUTHCOM) Counter-Illicit Trafficking operations.

On the most recent mission, over 100 Full-Time Support (FTS), active component and selected reserve (SELRES) Sailors deployed to South America for 60 days between mid-October and December. SELRES utilized a variety of funding sources including Annual Training (AT), Active Duty for Travel (ADT), and Inactive Duty Training Travel (IDTT).

Based at Naval Air Station Joint Reserve Base New Orleans, La., VAW-77 is the U.S. Navy's only fully-dedicated counter-transnational organized crime (C-TOC) squadron. The squadron was stood up in 1995 when the U.S. Congress created the reserve squadron as an additional resource in the so-called "War on Drugs."

The United States government advocated utilization of the Central Intelligence Agency (CIA) and the military in these efforts as early as 1982.

"While the Department of Defense is not the lead agency responsible for combating TOC networks, its unique capabilities can be leveraged to support other U.S. government and partner nation efforts," a U.S. Naval Forces Southern Command (SOUTHCOM) spokesman said.

"SOUTHCOM is aligned with and supports lead agencies, such as the Departments of Justice and State, as well as partner nations in the C-TOC fight."

SOUTHCOM, Joint Interagency Task Force-South, U.S. Navy, U.S. Coast Guard, U.S. Military Group, Drug Enforcement Agency (DEA), Columbian Navy (Spanish: Armada Nacional de la República de Colombia) and Colombian Air Force (Fuerza Aérea Colombiana) were all working together on the mission.

VAW-77 flew three E-2C Hawkeye Group II aircraft from their home base in New Orleans. Aircraft maintainers and support personnel were flown to and from Colombia aboard Commander Fleet Logistics Support Wing (CFLSW) C-40 Clipper aircraft.

During deployment, Nightwolves crews conducted patrol and reconnaissance missions.

According to VAW-77 Operations Officer Lt. Cmdr. Mike Sandridge, the Nightwolves flew a total of 104 sorties and compiled over 404 support flight hours.

"A typical day deployed consisted of two or three C-TOC mission sorties and as many as 14.5 flight hours each day," Sandridge said.

"Operating from Colombia gives VAW-77 the substantial benefit of working closely with Colombian air force and navy aircrews and intelligence personnel.

"This joint operations mind set greatly enhanced the Nightwolves' effectiveness and results in theatre."

On one patrol, VAW-77 crews assisted in the detection and interdiction of a self-propelled, semi-submersible (SPSS) that was carrying narcotics. This resulted in six narco-terrorist arrests and the seizure of 3.5 metric tons of illegal drugs with an estimated value of $610 million.

Photo of boat rescue. Provided by VAW-77

In addition, on another patrol, an E-2C Hawkeye operating using the call sign WOLF01 detected a capsized fishing vessel approximately 110 nautical miles northeast of Barranquilla, Columbia, in the Western Caribbean. Four persons were identified clinging to the overturned boat.

WOLF02, another Hawkeye on patrol, remained on station as the scene commander, while WOLF01 coordinated rescue efforts with a nearby merchant vessel, MV Green Cove.

"The four survivors were standing on the keel of the vessel, waiving yellow towels at us to indicate they were in distress and needed assistance," explained SELRES pilot and mission commander Cmdr. Russ Herrell.

"Our counter-drug mission quickly changed to a rescue-at-sea mission."

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Working behind the scenes in CONUS

Taking the fight to the enemy, in part, requires the proper execution of interdependent processes and systems. The NAE is a construct for collaboratively identifying, resolving/or mitigating readiness degraders in those processes and systems to enable delivery of combat-ready forces to the fleet.

The E-2C, flown by the Nightwolves, is a high-demand, low-inventory platform that is scheduled to begin its sundown in 2015. Challenges to ensure the legacy platform remains viable until new weapons systems are fully capable come with that transition. The community is also gearing up for an increase in its operational tempo in the coming months as well.

And because the reserves are staffed differently than the Navy's active duty component, filling billets is another challenge for the VAW community. The NAE currently is working to ensure it has the right number of qualified personnel with the right skills in the right place at the right time to deliver the right readiness today. It is also partnering with providers to increase the availability and shortening the lead times of obsolete components, and is monitoring the Program Related Logistics (PRL) budget. (PRL funding provides critical in-service engineering and logistics support required to maintain safe operations and improve readiness, supportability, and affordability of aviation systems.)

Other challenges that the NAE is addressing to sustain the health of the community include the increased demand to support the Hawkeye 2000 (an information technology modification and upgrade that enhances data management, system throughput, operator interfaces, connectivity, and situational awareness. This solution has kept the aircraft's mission systems current with the evolving operational environment.) and the introduction of the community's next platform – the E-2D. ■

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The Colombian Air Force sent in a Cessna C-560 twin-jet aircraft, and the Colombian navy dispatched one of their vessels to the scene.

So, after nine days of floating adrift, the four personnel were taken aboard the MV Green Cove and later taken to a Barranquilla hospital in Columbia for medical attention and observation.

Nightwolves Commanding Officer Cmdr. Todd Heyne said that the successes of the missions were due to a variety of factors.

"The accomplishments of this deployment can be directly attributed to the strong working relationship between FTS, AC, SELRES and Northrop Grumman civilian contractors," Heyne said.

"Each group brought a unique combination of skills, talents, and capabilities that enabled the entire team to succeed."

Commander Naval Air Forces Reserve Rear Adm. Chris Sadler summed up his satisfaction with the VAW-77 deployments.

"The "Nightwolves" extremely successful deployment to Colombia was noteworthy in many ways," Sadler said.

"First, in support of the National Security Strategy, VAW-77 disrupted transnational criminal organizations (as described above).

"Second, in support of Theater Security Cooperation, the "Nightwolves" worked closely with host nation naval and air force units," he continued.

"The squadron's SPSS bust garnered a written 'thank-you' from Colombian Naval Rear Admiral Narvaez, and the detection/rescue of four Colombian citizens whose boat had capsized received national coverage and demonstrated to their people that the military cooperation between our two countries benefited them directly.

"Indeed, trust cannot be surged. In short, VAW-77 provides a critical joint/coalition capability that adheres to the CNO's tenets of 'Warfighting first,' 'Operate forward' and 'Be ready' as well as the Chief of Navy Reserve's charge to be 'Ready now. Anytime, anywhere' to 'provide valued capabilities' from a 'ready and accessible force' while enabling 'the continuum of service.'"

BRAVO ZULU Nightwolves! ■

(Oceana continued from Page 2)

run, and changing the work schedule to include a one-hour overlap between shifts. Maintenance time increased to 300 minutes per shift per day and reduced the number of EXREPs by 79 percent.

"The cross-trained technician can run any gear that comes in," said AT2 Michael Tagg, F/A- 18 Radar Shop LPO. "The Sailors [assigned to Sea Operational Detachment] are now better trained to provide help to the fleet."

FRC Mid-Atlantic Site Oceana also reduced the size of its workforce in the Tire Shop and its TRR. "Before the Tire Event, we would induct two to 40 tires in one to two hours. It would take up to two hours before we could process [maintenance action forms] and two shifts of 40 to 45 people for the whole process," said Aviation Structural Mechanic 2nd Class Rebecca Tate, Tire Shop LPO.

"By coordinating with [Aviation Supply Detachment] that all changed," she said. "Batch inductions of tires were eliminated. The [ready-for-issue] tires are in and distributed by Supply. The shop has been downsized to 10 maintainers with two [collateral duty inspectors]. This lets maintainers with critical [Navy enlisted classifications] go where they are needed instead of helping us out. The other workers in the center are able to get to medical appointments and they don't work on weekends. And we are meeting our timeline of two days," said Tate.

Christopher Rice, FRC Mid-Atlantic Aircraft Department head (center), explains the F/A-18s' Planned Maintenance Interval production challenges to Avionics Technician Master Chief Joe Maurin, a member of Naval Air Systems Command Naval Aviation Maintenance Program Team (left), and Aviation Structural Mechanic Chief (AW) Brian Lusk, BoG coordinator.

While conducting analysis on the Tire Shop, the team discovered that the work center was responsible 17 percent of the error rate at the squadron; and 50 percent of that error rate was due to faulty documentation. Now squadrons requisition tire and wheel assemblies using its National Identification Item Number (NIIN). "Before the event, the tires were a local NIIN and paid for by the FRC. Now they are a national NIIN and are treated as a normal repairable. The squadron pays for the assembly," she said.

Continuous process improvement (CPI) is also being applied at the organizational level (O-level) at NAS Oceana. Strike Fighter Squadron (VFA) 32 applied 5S to its tool room, reducing the distance traveled by maintainers by 88 percent. O-level maintainers in Power Plants also used 5S to reorganize their shop space and store all like items together. Now tool boxes are located in one area making shift inventory easier and more efficient. Plans are in work to apply 5S to every work center during the winter and spring.

Corrosion control efforts underway at all three levels of maintenance were also spotlighted during the site visit. They include:

- artisans training Sailors and Marines on how to look for corrosion and how to properly address it
- increasing the number panels opened during the 86-day inspection
- hiring a corrosion control instructor
- prototyping the F/A-18E/F Maintenance Requirement Card process. (To date the average integrated maintenance concept turnaround time has decreased by 45 percent and the average number of requests for engineering Information was reduced from 34.4 to 17.8 per aircraft.)

BoG attendees also visited the Phase Maintenance Interval (PMI) hangar and discussed: the variation inherent in scheduling aircraft; how the repair cycle is lengthened when corrosion is found unexpectedly; how the PMI line mitigated an expected funding shortfall by collaborating with squadrons on delivery dates and reviewing its workforce schedule; and acquiring engineering dispositions for certain areas in the F/A-18.

BoG, O-level and FRC leadership also discussed: changes to facilities needed before the arrival of the Joint Strike Fighter; the qualifications of junior Marines and Sailors; the alignment of readiness reporting and resourcing mechanisms; rewriting the VFA Training and Readiness Matrix; the unavailability of Fentress – a runway used to practice carrier landings; growing black belts in the workforce; and CPI at the O-level. BoG attendees took these and other issues back to their commands for further review and possible resolution. ■

This article was modified after it was originally published. ~ Eds.

(First continued from Page 3)

really effective."

Once the team proved that the revised scheduling could work, they briefed other Mid-Atlantic sites. "All the sites tailored it to improve their performance. Not only did the WIP at Mid-Atlantic go down, but it has decreased at other sites as well," he said.

Current work

Another game-changer that may impact readiness beyond Oceana that Whittington is involved in is the improvement project to reduce time to reliably replenish in the Armament Division.

Each station in the division is currently configured to run a specific type of equipment. The work center also lacks a consistent work flow and space is primarily being used to warehouse components. More than 480 man-hours are spent each month on preservation and de-preservation of armament equipment.

Work is underway to achieve a prescribed level of production, including improving manpower use, decentralizing production efforts by establishing universal work cells, cross-training maintainers, creating buffers and realigning/rearranging schedules.

Plans also include installing lights at each of the work spaces to indicated a collateral duty inspector is needed, enabling a single collateral duty inspector to cover an entire work center. A green belt is working on the configuration for the tool boxes and on a new kitting design. Plans also call for the building to eventually be climate-controlled.

Plan with a purpose

After 26 years in the Navy, Whittington said his second career has changed how he looks at his everyday surroundings. "I've gone from a do-whatever-it-takes-to-get-it-done approach to understanding the benefits of CPI and even training the trainers.

"It makes you look at things in different ways. I've seen things I never saw before. I'll walk into a [business] and say 'Man, this place is a mess,' or 'This is interesting how they did this'," he said.

Whittington advises CPI practitioners to apply CPI with purpose. "Don't do events just to get qualified," he said. "Put measurements in place to validate the process. Understand what success means. And communicate, communicate, communicate."

CPI practitioners, he said, should also understand what they are trying to accomplish when making a decision. "Once you possess the knowledge, the decision should first focus on bettering the lives of those people who work there. Get their input. They have to believe it in order for it to work. That's how it is sustained," he said.

After all, said Whittington, CPI is all about the Sailor and Marine. "Job satisfaction, enthusiasm for the job is important. The work is on their backs – they are the workforce," he said. "If you can find a way to make their life better, everyone's life is better." ■

(Competition continued from Page 1)

projects which will be displayed at the DoD/DoN CPI Symposium scheduled for June 20-22 in Lansdowne, Va.

Last year, the Naval Aviation Enterprise responded overwhelmingly - more than 65 storyboards were sent to the PIB for the event. Marine Aviation Logistics Squadron (MALS) 24 took first place in the "Best Use of CPI as an Enabler" and "Best Way to Stretch a Dollar" and second in the "Best Opportunity for Replication" categories in the 2011 competition. MALS-39, Fleet Readiness Center (FRC) West Fort Worth/MALS-41, MALS-31, and *USS Dwight D. Eisenhower* (CVN 69) also placed. FRC Southeast Detachment Mayport, FRC Mid-Atlantic Site New Orleans, and MALS-11 received honorable mentions.

To view all the criterion, click here or go to: https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/current_readiness/MSCM/AirSpeed/Public%20Affairs/2012_DoN_CPI_Project_Competition.aspx

Update: IOY, LOY and SOY announcement rescheduled

Winners of the Maintenance and Supply Integration Performance Improvement Branch 5th annual AIR*Speed* Excellence in Continuous Process Improvement (CPI) awards were selected in late January. Their names will be announced via a Navy message after they receive notification. Look for feature articles in a future issue of the *Current Readiness/Enterprise AIRSpeed Newsletter* that focuses on their successes, future projects and CPI philosophies.

Maj. Darryn Lindsey, Marine Aviation Logistics Squadron 11 ordnance officer (left, pointing), explains to Maj. Gen. Terry Robling, U.S. Marine Corps Deputy Commandant for Aviation; Vice Adm. Al Myers, Commander, Naval Air Forces; and Boots-on-the-Ground attendees how making the current building a level-three dynamic preservation facility for more than 2,500 pieces of gear would improve Ordnance Division's readiness.

(Miramar continued from Page 4)

smaller flight schedules and give maintenance the chance to get RSA aircraft to you."

"The biggest change," said Aviation Maintenance Officer Maj. David Hudock, "is the communication between me and [Schwarm].

"Now we are starting to see the secondary constraints, such as ranges, red air (simulated combat mission against opposing forces), the number of instructors available and fuel trucks emerge as a barrier to readiness. We are working those," said Hudock.

Replicating across platforms

An aviation machinist mate first class' (AD1) inputs during a rapid improvement event (RIE) were credited at the BoG for spurring a change in VMFAT-101's Phase Maintenance.

As the team mapped Phase B maintenance process from induction to buy back to see where improvements could be made to increase readiness, AD1 Carolyn White, VMFAT-101 Power Line lead petty officer, discovered the F/A-18 A-D's Phase Maintenance Requirement Cards were out of sequence and that the services conducted phase maintenance differently.

"I have maintained four different platforms and participated in phase maintenance on four different aircraft," she said. "I asked why they weren't consistent between [the Navy and Marine Corps]. I'd seen better maintenances processes."

VMFAT-101 used an H-60 continuous process improvement (CPI) project to replicate the reordering of Phase Maintenance Sequence Control Cards. It also right-sized phased kits, returning more than $47,000 worth of consumables to Supply. Currently, aircraft is completing phase maintenance in less than two weeks.

MALS-11 solution to increase the

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(Miramar continued from Page 10)

time on wing (TOW) of generator control units (GCU) also garnered the attention of NAE leadership.

Maintainers were seeing pitting on the flange tube caused by silicone controlled rectifiers (SCR) when they were inducted for readiness. (SCRs function as a switch that can turn on or off small or large amounts of power.) To mitigate the damage, the MALS implemented a new procedure. Now each GCU is fully torn down, regardless of the discrepancy, and given a full 360-degree inspection. The thermal grease also is removed and re-applied on the flange tube each time. The beyond the capability of maintenance (BCM) rate has decreased from 42 percent to 25 percent.

"We found out that the grease overheats or that it was misapplied during previous maintenance," said Capt. Arlington Finch, MALS-11 avionics officer. "It takes one hour to perform the visual inspection and we are in discussion to make it required." he said.

Another tactic maintainers employed that increased the reliability of the GCU was to replace all of its SCRs during maintenance instead of just the one that failed. "Maintainers have learned that when one fails, the others will soon follow," he said.

Before implementing this process, the GCU had a TOW less than two months. The first GCU to undergo this process increased its TOW to three months; in the first month, the average TOW for all GCUs increased to more than two months. Now the average TOW is more than six months. One GCU even has a TOW of more than 700 days.

Other MALS-11 CPI success stories include:

- reducing the time to reliably replenish (TRR) in the Electrical/ Instrument Branch from 33 days to five days in less than a year
- reducing APG-65 Radar Set Test Station/ Related Test Program Set work center's backlog from more than 100 components zero components. The work center's TRR is currently averaging seven days
- reducing the TRR of the APG-73 radar by more than 86 percent with current Consolidated Automatic Support System (CASS), Reconfigurable Transportable (RT) –CASS, and RT-CASS (High Power) equipment
- maintaining the AWG-9 Low Frequency Test Station's TRR of less than a week for the past two years -- the lowest TRR among all Marine Corps and Navy sites with the same capability
- Reducing the Module/ Microminiature Repair Branch TRR from by 94 percent by transitioning from CASS to the Hybrid Test Set
- realizing a cost avoidance of $300,000 in the maintenance of F/A-18 canopies. In 2009, an artisan was assigned to MALS-11 to polish the six different types of Hornet canopies. The embedded expertise reduced its turnaround time by more than 62 percent. This process has been replicated at MALS-31.

AD1 Carolyn White, VMFAT-101 Power Line lead petty officer, explains to Larry Cox, a U.S. Marine Corps representative assigned to Commander, Naval Air Forces Supply Ashore Policy and Training, how the Phase Maintenance Sequence Control Card improvements made to the H-60 community's phase maintenance were replicated in the F/A-18 community to increase aircraft availability.

MALS-11 is also in the process of implementing the Data Display Indicator (DDI) Packaging Initiative which is projected to cost avoid $10,000 per shipped item. "The strapping mechanisms in the shipping containers were coming loose during shipping or during serial number verification. If the DDI faceplate or chassis is damaged, it's an automatic BCM (sent to a Level 3 repair facility). In FY11, it cost more than $100,000 and 9,000 man-hours on this asset alone," said Finch. Maintainers worked with the original equipment manufacturer to replicate its packaging for the DDI – at a cost of

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A tool of the trade

Maynard has participated in four events in MALS-11 and led the Forward Looking Infrared/Optical Shop event. The advanced avionics technician said that another benefit of being assigned to the Avionics Division is that he must also work in the environment he created. He sees the elimination of variation as his main approach to CPI.

"I like Six Sigma because it focuses on reducing the number of errors made, not just eliminating the number of maintenance steps in a process." he said. "We haven't moved anything in our work center. To me, CPI is not how many steps can be reduced, but figuring out what is keeping us from fixing components. Performing maintenance faster means more mistakes are being made."

Maintainer training was key to reducing time to repair the asset, said Maynard. "[Naval Air Technical Data and Engineering Services Command] taught the Marines faster ways to test components and how to work around quirks in each bench. Raytheon representatives worked hand-in-hand with the engineer that fixes the benches. With that knowledge, Marines issued better products. Our parts stay out longer and reduce how long jets are waiting on it," he said.

Access to information throughout the command has improved as well. "We contacted a Raytheon engineer and he sent back a schematic of the APG-73 gear. We can now chase down gripes and he can tell us if we are on the right track," said Maynard.

Once a month, the collateral duty inspectors meet to discuss the principles of CPI and its tools. "MALS-11 has more than 900 Marines. While strategically selecting Marines to attend formal AIR*Speed* training, not all Marines are able to receive this benefit. While working toward achieving their certification Marines are exposed to AIR*Speed* through mentorship and 'hip pocket' training to encourage further growth, often through off-duty education. This approach has inspired five Marines in the Radar Shop to obtain green belt certification this way.

"MALS-11 Marines also share their lessons learned and best practices with other MALS. Every month we have a teleconference on radars and let them know what we found," he said.

The efforts have yielded both tangible and intangible results. The time to repair 4,000 radar assets has been reduced by 89 percent. "The average workload was 90 items. Now it's 10. We haven't broken 20 items waiting for repair in 1½ years," he said. We were getting two to three radars to repair each shift. Now we get one a day. This freed up more time for Marines to spend fixing components and fixing them better," said Maynard.

"We were working seven days a week and alternative weekends. Now we are working five days a week with only two Marines on the weekend. They've got their free time back and there is no back log.

"Every time we set a standard, the Marines met it," he said. ■

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$4.38 a box.

"Without process improvement, we are in a battle for inches of readiness," said Lt. Col. Patrick McDoniel, MALS-11 commanding officer. "By partnering with other stakeholders and providers and judiciously position our assets, we can get yards."

Vice Adm. Al Myers, Commander, Naval Air Forces; Lt. Gen. Terry Robling, U.S. Marine Corps Deputy Commandant for Aviation; and Maj. Gen. Andrew O'Donnell, 3rd Marine Aircraft Wing Commanding General, led the site visit. Representatives from Naval Supply Systems Command Weapons Systems Support; Marine Forces Command; Naval Air Systems Command; Commander, Naval Air Force Atlantic; Center for Naval Aviation Technical Training; Headquarters Marine Corps, Aviation Logistics Support Branch; and contractor support also were in attendance.

MAG-11 and NAE leadership also discussed: replicating Naval Air Station Lemoore's fuel truck initiative that relocated aircraft refueling from the pit to the flight line and could possibly reduce refueling time by 20 minutes; funding to procure the required range and depth of Training Support Allowance equipment; increasing MALS-11's repair capability of the GCUs; the need for a black belt to develop a maintenance integration strategy for the remainder of the Hornet's life cycle and address out-of-reporting aircraft; the need for a level-three dynamic preservation facility for ordnance gear; the way ahead for CPI replication opportunities in the NAE; improving the communication between the squadron and depot-level maintenance on aircraft maintenance; the High Flight Hour program and the condition of inducted aircraft; providing maintainers with additional training on corrosion; improving the collaboration between organizational- and depot-level maintenance; procuring a Raytheon spread bench to improve first pass yield; and the attendance of Joint Strike Fighter representatives at future BoG events.

BoG attendees took these and other issues back to their commands for further review and possible resolution. ■

Links of interest

1. ***Sustaining U.S. Global Leadership: Priorities for 21st Century Defense****
   This strategic guidance document describes the projected security environment and the key military missions for which the Department of Defense (DoD) will prepare.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/Document%20Library/DoD%20Strategic%20Guidance%20Jan%2012.pdf

2. ***Department of the Navy Business Transformation Plan****
   The Business Transformation Plan communicates the strategy and approach of the DoN Business Mission Area – its olicies, processes, information and systems relating to the end-to-end financial, logistical, facility management, human capital, acquisition administrative and other functions that support the warfighter.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/AirSpeed%20Newsletters/Newsletter%20repository/General%20documents/BTP_FY12_Signed.pdf

3. ***NAE Strategic Plan****
   This document is the Naval Aviation Enterprise's framework for action to advance and sustain the balance of readiness and cost.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/Lists/Announcements/Attachments/42/04%20NAE%20Strategic%20Plan.pdf

4. ***NAE 2012 Science and Technology Objectives****
   Learn about the Naval Aviation Enterprise's current and future operational capability needs.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/Document%20Library/2010%20Science%20and%20Technology%20Objectives.pdf

5. ***Naval Aviation Vision – January 2012***
   Read about the Naval Aviation's current capabilities and future platform transitions in this document.
   http://www.public.navy.mil/airfor/nae/Vision%20Book/Naval_Aviation_Vision.pdf

6. **NAE *Air Plan****
   Selected 2011 Accomplishments: Naval Aviation's Enterprise Approach Improves Cost-Effective Readiness
   A sample of the work focused on increasing warfighter readiness.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/Air%20Plans/22%20-%20Jan12%20Air%20Plan.pdf

7. **DON *CPI Gram****
   January — Read how Naval Air Systems Command developed the Procurement Management System which maps out all elements of the purchasing cycle, allowing supervisors to better manage program workload and reducing the time it takes to prepare, plan, and ultimately award a contract.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/AirSpeed%20Newsletters/Newsletter%20repository/CPI%20News/DON_CPI_Gram-January.pdf

   February — Continuous process improvement practitioners can find iGrafx and MiniTab tricks and tips in this issue.
   https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/AirSpeed%20Newsletters/Newsletter%20repository/CPI%20News/DON_CPI_Gram-February-Final.pdf

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8. **Marine Corps Welcomes First F-35B Aircraft to its Fleet**
With its short takeoff and vertical landing capabilities, the F-35B can operate from expeditionary airfields in remote, non-permissive environments with shorter runways, contributing to the Marine Corps' role as the nation's expeditionary force-in-readiness.
http://www.navy.mil/search/display.asp?story_id=64727

9. ***Rhumb Lines - Quality of Today's Sailor****
This *Rhumb Lines* highlights our Sailors, and how they continue to develop the skills and knowledge needed to meet the challenges of the Navy's global mission, and exemplify the Navy's core values of honor, courage and commitment.
https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/AirSpeed%20Newsletters/Newsletter%20repository/Rhumb%20Lines/Quality_of_Todays_Sailors.pdf

10. **Navy to Begin Tests on Electromagnetic Railgun Prototype Launcher**
With its increased velocity and extended range, the EM Railgun will give Sailors a multi-mission capability, allowing them to conduct precise naval surface fire support, or land strikes; cruise missile and ballistic missile defense; and surface warfare to deter enemy vessels. Navy planners are targeting a 50- to 100-nautical mile initial capability with expansion up to 220 nautical miles.
http://www.navy.mil/search/display.asp?story_id=65193

Electromagnetic Railgun Prototype Launcher.
Photo by Office of Naval Research

11. **Poseidon Lands at Naval Air Station Jacksonville for Weapons Certification**
The "ordies" are pursuing their certifications to handle, load and deliver ordnance such as torpedoes, missiles and mines on the P-8A.
http://www.navy.mil/search/display.asp?story_id=65247

12. **P-8A training simulators make their debut**
The operational flight trainer is a full-motion, reproduction of the aircraft cockpit, which replicates the visual out-of-window display and cockpit noises. It simulates the systems, equipment and features, as well as the performance characteristics for pilot mission-readiness and proficiency.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4898

13. **FRCSE repairs lasers, improves turnaround time to Fleet**
Collaborating with Northrop Grumman gives the Navy access to proprietary information too cost prohibitive to acquire.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4889

14. **Small Tactical Unmanned Air System executes early operational capability**
As part of the RQ-21A Small Tactical Unmanned Aircraft System Early Operational Capability (EOC), personnel from Marine Unmanned Aerial Vehicle Squadron 2 and 3 and Insitu operators exercised the current configuration of Insitu's Integrator for the two-hour maiden flight.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4887

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K-MAX unmanned helicopter makes first cargo delivery

A new era in unmanned aviation when Marine Unmanned Aerial Vehicle Squadron 1 operated a K-MAX unmanned helicopter during its historic 90-minute flight, recently. K-MAX is the Marine's first unmanned helicopter designed for resupplying troops in remote locations. During its maiden flight, K-MAX successfully delivered about 3,500 pounds of food and supplies to troops at a forward operating base in Afghanistan without risk to a pilot. (Photo courtesy of Lockheed Martin/NAVAIR)

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15. **BAMS UAS program advances with launch of first radar flight**
Thirty test-bed aircraft flights for early Multi-Function Active Sensor trials are planned which will focus on maturing the performance of maritime surface surveillance modes of the radar.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4888

16. **NACRA: can you see me now? Smart phone technology takes leap to battlefield**
Ad hoc data, streaming video, voice and text was shared across an encrypted/tactical 4G network using handheld cellular smart phones during a simulation conducted to prove that smart phone technology could be used to improve battlefield awareness.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4890

17. **World's first net-enabled weapon completes developmental testing**
Joint Stand-off Weapon C -1, DoD's first network-enabled weapon, completed developmental test at Point Mugu Sea Range, Calif., enabling the program to transition into the integrated test ahead of schedule.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4884

18. **Navy progresses in demonstrating unmanned refueling capability**
As part of the Unmanned Combat Air System Demonstration program, the Navy and industry partner Northrop Grumman have been developing Autonomous Aerial Refueling technologies to refuel unmanned aircraft in flight.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4882

19. **PMA-213 celebrates new GPS-based landing system progress**
The Naval Air Traffic Management Systems Program Office is retiring aging, radar-based, precision-approach and landing systems and transitioning to a GPS-based precision-approach and landing system.
http://www.navair.navy.mil/index.cfm?fuseaction=home.NAVAIRNewsStory&id=4883

20. **Lean Stuff***
The following PDF documents are a list of links from commercial resources compiled periodically by NAVSEA and disseminated to CPI practitioners and organizations throughout the Navy.
https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/AirSpeed%20Newsletters/Newsletter%20repository/Lean_Stuff/10-2

- Site is CAC-enabled. Some readers may not be able to access the link.

Content in this publication has been cleared for release.