

Current Readiness & Enterprise AIRSpeed Newsletter



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The NAE and the E-6B: The process is working for us

Commentary

by Capt. Brian Costello, Commodore
Strategic Communications Wing One

The E-6B Take Charge and Move Out (TACAMO) community has been involved in the Naval Aviation Enterprise (NAE) processes for almost three years and recently briefed the Air Board on its readiness issues. I've seen great improvement and focus over the two years I've been involved.

Specifically, I've been encouraged by progress made in manpower, Navy Enlisted Classification (NEC) Fit statistics, and in the Qualified Proficient Technicians (QPT) initiative – all of which affect my ability to meet my mission tasking. I've also seen a great increase in this community's understanding of cost drivers. The improved granularity of the data has allowed us to gain efficiencies in areas that make the most sense and have the greatest impact.

An additional benefit to the E-6B community has been the development of a much closer working relationship among key players. The team is made up of wing personnel, Airborne Strategic Command and Control Program Office (PMA 271), the fleet support team (FST), squadron commanding officers, executive officers, and others, including PMA 205 (Naval Air Systems Command (NAVAIR) Aviation Training Systems). The mindset of this great team is to attack problems, always keeping effectiveness and efficiency as goals without losing sight of fleet

(E-6B continued on Page 2)

Rapid Improvement Playbook now ready for roll-out

Jacquelyn Millham, Current Readiness/Enterprise AIRSpeed PAO

Sailors aboard *USS Abraham Lincoln* (CVN 72) were tasked last year to validate improvements realized by a prototype conducted in *USS John C. Stennis*' (CVN 74) Aircraft Intermediate Maintenance Department. *Stennis* had reduced its F404 and F414 engines' time to reliably replenish (TRR) by a considerable amount. Cmdr. Mark Maxwell, mission director for Naval Aviation Schools Command (NASC) 1194 Fleet Performance Improvement Group and a certified Black Belt, led the rapid improvement event (RIE).

"The shop did not seem to have flow-related issues; however after further review and drawing a value stream map we saw otherwise," he said. "We used basic Lean principles:

We developed a charter and a supplier, input, process, output and customer flow chart and then mapped the existing process. We brainstormed potential issues, identified potential non-value added elements as well as other types of waste, developed a cause and effect diagram to highlight critical to quality items, and also created a future state process map."

Lincoln was able to reduce its TRR from 9 days to 4 days and reduce the number of steps taken by its maintainers from 3,400 steps to 1,760.

The event had all the earmarks of an Enterprise AIRSpeed implementation – but with one major dif-

(Playbook continued on Page 3)

In this issue:

1. [The NAE and the E-6B: The process is working for us](#)
A commentary by the T/M/S's commodore on how the NAE helped to resolve an issue that degraded its readiness. (Page 1)
2. [The Rapid Improvement Playbook now ready for roll-out](#)
Another team uses CPI tools to improve processes aboard ships. (Page 1)
3. [NAE's hybrid sailor is shaping the force for the 21st Century](#)
Sailors cross-train to maximize the Navy's workforce. (Page 2)
4. [AIRSpeed Innovator of the Year: I love working as a Black Belt](#)
AE2 Carla Trent played a major role in realizing FRC Mid-Atlantic Site Norfolk's \$4 million cost avoidance. (Page 4)
5. [NAE TMS master schedule](#)
6. [Links of interest](#)

NAE's Hybrid Sailor is shaping the force for the 21st Century

Dave Mahoney, Naval Aviation Enterprise Team Member

In early 2006, the culmination of numerous broad-based efforts focused on improving the flexibility and efficiency in 12 of the 15 Fleet Logistics Support (VR) Air Wing's "Sailor-based" maintenance departments.

These efforts resulted in the initiation of the Hybrid Sailor concept. The concept seeks to produce a more diverse and technically-skilled workforce and includes squadron-based aviation maintenance ratings (aviation machinist's mate (AD), aviation structural mechanic, aviation structural mechanic-safety equipment, aviation electrician's mate, aviation electronics technician, aviation ordnanceman, and aviation support equipment technician). In the simplest of terms, the Hybrid Sailor concept relies on cross-training within each aviation maintenance division to capitalize on system similarities and maximize manpower.

The associated training is operationally-focused and

initially classroom-intensive. In nearly all cases, the initial training is held at the air wing level, inside of an academic environment away from day-to-day operational pressures, so the cornerstones of standardization and professionalism can be effectively taught.

Currently, non-Hybrid Sailor squadrons work within traditional organizational structures. The power plant mechanic "AD" is limited to maintaining power plant systems and the airframe mechanic maintains the aircraft structure and hydraulic systems.

Under the Hybrid Sailor structure, the cross-trained power plant and airframe mechanic maintains power plants, structures, hydraulics, and environmental systems. Sailors are trained in all these systems and use their core rating competency along with hybrid training. Similarly within the

(Hybrid continued on Page 5)

(E-6B continued from Page 1)

requirements and readiness.

A key to keeping this focus is the series of briefs culminating with the community brief to the Air Board. There is a natural tendency to paint oneself in a good light, downplaying problems or issues. We have learned to fight this tendency and allow the NAE process to help and guide the community.

Last year, we had an issue with our Weapons System Trainer (WST). There was a requirement for back-end aircrew training that took years to get funded and was finally on contract. But there were problems with the WST development and numerous changes in delivery dates. Additionally, it appeared that the WST wouldn't provide the level of training we needed.

We raised the WST issue at the Air Board brief and the response and assistance of the NAE was dramatic. The NAE stepped in at a critical time as looming impasses began to emerge in the WST development process; the contractor and government representatives could not reach agreement on the status and the way ahead for numerous WST discrepancy reports.

As a result of the NAE stepping in to advocate on the government's

behalf with the contractor's corporate leadership, the interaction at the program manager, program engineer and subject matter expert levels greatly improved.

The following key capabilities were agreed to and provided as a result:

- Ultra High Frequency Command, Control and Communications air-to-air link
 - Military Strategic, Tactical & Relay satellite – MILSTAR constellation (Beam management and Net Control, over-the-air rekeying and other advanced management & administrative features)
- Contractor interaction with our fleet replacement squadron and weapons training unit (WTU) subject matter experts (SME) increased exponentially:
- Fleet Air Reconnaissance Squadron (VQ) 7/WTU manpower was provided from the time of NAE intervention in August 2007 until the WST was ready for tasking on Aug. 1;
 - Ten or more military SMEs took eight separate temporary assigned duty (TAD) trips;
 - Twice-a-week telephone conferences took place during the entire period;
 - And 7,780 additional man-hours (TAD and local) were allocated to the delivery of the WST. Much of

that time was spent responding to NAVAIR or contractor requests for information or assistance:

- 2,700 TAD man-hours (at Orlando, Fla.; Omaha, Neb.; and Dayton, Ohio)
- 5,080 SME man-hours at Tinker Air Force Base

The trainer was delivered to our WTU in April. A supportability audit was conducted in July by VQ-7 training representatives and the WTU conducted a scenario evaluation in August.

NAVAIR and contractor representatives were provided with a prioritized list of discrepancies identified during the Joint Final Inspection (JFI) and Supportability Audit to be corrected during the one-year contractor logistical support contract. PMA-205 is procuring \$1.3 million necessary to fund engineering change proposals (ECPs) to correct existing or pending communication equipment configuration changes.

I view our WST as a NAE success story. I feel strongly about the process and focus that the enterprise can bring to an issue. The E-6B TACAMO community is better off due to the collaboration of its stakeholders and NAE senior leadership. ■

(Playbook continued from Page 1)

ference. The rapid improvement event was sponsored by the Operational Process Improvement and Standardization Team (OPIS), a sub-team of the Carrier Readiness Team.

OPIS improves and standardizes aircraft carriers' processes that have significant impact on readiness, cost, people, productivity and cycle time while creating continuous process improvement (CPI) opportunities and identifying best practices for use across all aircraft carriers.

"OPIS realized that the improved processes first conducted onboard *Stennis* had the potential to improve engine production and could be a 'quick win' for the fleet," said Charlie Chan, OPIS and Manpower Team consultant. Before endorsing the improvements, he said, they wanted two other events to take place – first aboard *Stennis* and then *Lincoln* – to verify and validate them.

The result is the Rapid Improvement Playbook – a compilation of best practices from the two aircraft carriers. OPIS expects other aircraft carriers will be able to replicate the improved processes with minimal changes. They include:

- grouping major equipment and moving them to the point of use;
- shadowing workbench shelves for easier identification of equipment;
- moving F404 & F414 modules from the "engine mountain" (a staging area in a hangar bay where large and heavy items, especially engines, are stored) to an adjacent maintenance room;
- stocking pre-expenditure bins with frequently used items;
- swapping the location of ready-for-issue and non-ready for-issue (NRFI) rails;
- moving applicable slings and harnesses to NRFI rails;
- co-locating computers, publications, check sheets, material safety data sheets and other documentation to workbenches;
- identifying all excess slings and other unused equipment from the shop floor and removing them off the ship;
- co-locating all Jet Engine Test Instrumentation (JETI) cables and adapters to the JETI area;
- labeling all drawers, cabinets, lockers;
- and labeling floor areas for specific pieces of equipment.

Stennis' playbook improvements work in tandem with improvements realized by another RIE – moving the engine mountain. Both improvements recently resulted in the issuance of two F404 and one F414 engines to the embarked carrier air wing in record time, said Cmdr. Tim Pfannenstien, then the *Stennis*' Aircraft Intermediate Maintenance Department officer. "It took just under three hours, starting from time of notice to the time the engines were at the receiving squadron jets, to deliver them to the customer," he said. (For more information about the engine mountain,

go to <http://www.cnaf.navy.mil/airspeed/default.asp?PressReleaseID=53534>)

Stennis recently added T-56 engines to its inventory. Like the F404s and the F414s in the original design, Pfannenstien said the T-56s retrograde engines can be inserted in the mountain in the same manner to maintain the linear flow into and out of the Jet Shop. Pfannenstien also said that a template will be proposed to incorporate this improved configuration to include the T-56 canisters.

"Co-location was the key to flow," said Maxwell about the RIE onboard *Lincoln*. "Everything that was needed to tear down and rebuild an engine had to be at the point of use."

"The longest pole in the tent was co-locating

the engine modules in the old Individual Materials Readiness List (IMRL) storeroom. This was completed by the team that was made of mostly enlisted Sailors after we left the ship. They did a great job following through with the plan and now reap the rewards from it. Cmdr. Mary Esfandiari (NASC 1194, Green Belt and a Senior Executive Service (SES) at NASA Space Center) and I only gave them guidance," added Maxwell.

Chan said the maintainers

who validated the prototype believe that even more efficiencies can be gained throughout the Fleet, despite the ships having different configurations. *Lincoln*, for example, applied the lessons learned from *Stennis* and made only two adjustments to the playbook: relocating IMRL to refurbished benches and lockers; and relocating all 404/414 high and low power turbines, combustion modules and fans from the mountain to the shop.

Plans are in work to deliver the Proven Practice Playbooks, such as the F404/F414 reduction of TRR, to all carriers as they gain access to Continuous Process Improvement Management System (CPIMS), which is part of the Strike Force Implementation Plan that Commander, Naval Air Forces N422 and the OPIS Team are reviewing.

OPIS also plans to expand CPI aboard all aircraft carriers beyond aircraft maintenance and supply. "We found that all of the ships have at least one Green Belt or Black Belt aboard. We are looking at introducing or supporting current CPI activities in the remaining 16-plus departments, including Combat Systems, Weapons Department, Engineering, Medical, and others," said Chan.

Maxwell, who also is a reservist and facilitator for a major trauma hospital system in North Carolina, said Sailors who are experiencing CPI for the first time should not focus on the financial reasons behind the effort. "Do it because it makes sense and makes your lives easier," he said. "Love the challenge and benefits. Then the rest will follow. Don't talk it – walk it!" ■



Engines ready to be installed

AIRSpeed Innovator of the Year: I love working as a Black Belt

Jacquelyn Millham, Current Readiness/Enterprise AIRSpeed PAO

Editors' Note: Marine Aviation Logistics Squadron 11 was recognized as the 2008 Enterprise AIRSpeed's Site of the Year. For more information, go to: <http://www.cnaf.navy.mil/airspeed/default.asp?PressReleaseID=53840>.

AE2 Carla Trent, a Black Belt on the Fleet Readiness Center Mid-Atlantic (FRCMA) Site Norfolk AIRSpeed Site Core Team, was named the 2008 Master Gunnery Sergeant John Evancho Innovator of the Year Award winner in August. The award is given to an enlisted Sailor or Marine who demonstrates innovative thinking, inspirational leadership, and outstanding performance in the field of continuous process improvement (CPI) and who delivers excellent service to his or her customer – the flight line.

Trent, the most tenured member of the FRCMA Site Core Team, was recognized for her work in piloting AIRSpeed at Norfolk. She designed and spearheaded a comprehensive and auditable 5S sustainment program for use throughout FRCMA and developed a mechanism to locally track the time on wing, cost of repair and discrepancy trends for the T-56 engine and related components. FRCMA Site Oceana hand selected her to lead their Theory of Constraints design of their Power Plants Division

Trent also taught Green Belt classes to FRCMA Site Oceana, Helicopter Mine Countermeasures Squadron 14, USS Dwight D. Eisenhower (CVN 69), and FRCMA In-service Repair personnel. As a result of her work, FRCMA Site Norfolk

has achieved more than \$3.9 million in cost avoidance and identified an additional \$5.3 million in potential cost avoidance. In addition, 90 percent of all FRCMA Site Norfolk work centers have reduced their time to reliably replenish (TRR), with 45 percent of all work centers reducing their TRR to 10 days or less.



AE2 Carla Trent

Despite her initial misgivings about AIRSpeed, Trent believes she has found her calling.

Like other Sailors and Marines, she said she disliked CPI because of the changes made in her work center. But working in a Lean environment for a year turned her into a champion.

Trent was selected as a design team member for FRCMA Site Norfolk's Wave 1 AIRSpeed implementation in February 2006.

The Theory of Constraints brought it together for her. "I had a very knowledgeable coach, Dave Stewart (a member of Fleet Support Team) who ensured that all my work had prepared me and that I knew the thought process behind the methodology," she said.

Recognizing her skill and enthusiasm for CPI, her command assigned her to the Site Core Team and tapped her to lead the remaining four waves of implementation.

Trent said that her experiences have strengthened her leadership

skills and her perspective on leadership. "An event," she said, "will never be effective unless the personnel in that area believe that you have something to offer them."

"You cannot force change; you have to sell it," she said.

Positional authority isn't always the easiest role to be in, she said. "Winning every battle isn't necessary as long as the primary objective is achieved," she said.

As a Sailor who has worked in the work center and as a Site Core Team member, she appreciates how important it is to understand the entire system before trying to implement changes. "You can expect only minimal results if you only apply it to parts of the process, and you can expect no results if it is not applied to the system.

"My advice is to never take anything at face value, follow the processes that are given to you but question them also. Most of the things I have learned come from asking why I am doing the tasks at hand. Asking why sometimes gives the appearance of negativity and resistance, but in reality, the purpose of asking why is simply to understand. When you understand, you can provide better results," she said.

"No one can be successful in this program without support and trust from their leadership. I have only made it this far today because of the people I work with and the people I work for," said Trent.

Trent joined the Navy to do something different. But she said she found something else.

"I love working as a Black Belt. I intend to continue to use my qualifications and training wherever I can apply it, regardless of whether or not it is my primary job," she said. ■



Understanding the system

(From left to right) A 3rd Marine Aircraft Wing AIRSpeed Office team member, Gunnery Sgt. Antonio Salazar from Marine Corps Air Station (MCAS) Miramar Fuels Division, and Lt. Cmdr. Alvin Ogletree, Performance Improvement Branch team member, discuss a new airfield marking system that will be used at MCAS Miramar to help fuel drivers locate aircraft that require fuel. The improvement event was a result of concerns expressed by personnel assigned to Marine Aerial Refueler Transport Squadron (VMGR) 352, VMGR-252 and VMGR-152 about the use of hot refueling stations and refueling trucks during VMGR-352's AIRSpeed implementation last spring. A simulation was conducted on the new processes in mid-November. Photo by the Performance Improvement Branch.

(Hybrid continued from Page 2)

Avionics Division, electricians and avionics technicians cross-train to maintain the entire avionics package and power distribution systems.

Success with the Hybrid Sailor program has been proven to be adaptable across the Navy's organizational framework of organic and commercially-derived aircraft within Commander, Fleet Logistics Support Wing (CFLSW). CFLSW has operated a C-130 Hercules Hybrid Sailor training pipeline and housed the initial Hybrid Sailor training of personnel assigned to C-40 aircraft (Boeing 737 variant) squadrons at the Boeing company school in Everett, Wash.

This training includes classroom theory and systems operation along with required ground support equipment training and licensing. Additionally, practical repair and troubleshooting problems are simulated to hone students'

skills. Following formal training, Sailors achieve their final qualifications through on-the-job experience in their operational squadrons.

CFLSW's vision is to formally provide this comprehensive curriculum at the Aviation Logistics Training Center (ALTC) in Fort Worth, Texas. This concept will then be put to work in maintenance departments throughout the wing to mitigate risks associated with Selected Reserve (SELRES) manpower fluctuations and the fixed-wing enlisted aircrew (AWF) rating merger. The Hybrid Sailor program has produced cross-trained and well-rounded maintenance technicians capable of performing and leading maintenance efforts commensurate to airframe and power plant mechanics while keeping the flexibility expected from uniformed service members. ■

Links of interest

1. NAVAIR AIRSpeed November Snapshots: <http://www.cnaf.navy.mil/airspeed/content.aspx?AttachmentID=506>
2. M&SCM received an honorable mention award as runner up for AFEI's Government Award for Excellence in Enterprise Integration: <http://www.cnaf.navy.mil/nae/default.asp?PressReleaseID=53831>
3. AIRSpeed helps reduce flight delays and increase flight testing efficiency at Pax River Atlantic Test Range <http://www.cnaf.navy.mil/airspeed/main.asp?ItemID=1282>
4. Fleet Readiness Center Southwest Almanac:
September/October issue: <https://extra.cnaf.navy.mil/content.asp?ContentID=D7070509-4A13-4175-926E-1E32441&Type=0&Extension=.pdf>
November/December issue: <https://extra.cnaf.navy.mil/content.asp?ContentID=24F198CE-BCB3-4D15-A3EB-B9D0078&Type=0&Extension=.pdf>
5. Second annual summit clarifies IMA's role in Naval Aviation's readiness strategy: <http://www.cnaf.navy.mil/airspeed/default.asp?PressReleaseID=53839>
Enterprise AIRSpeed Summit photo essay (link): <http://www.cnaf.navy.mil/airspeed/content.asp?ItemID=1286>