

# Current Readiness & Enterprise AIRSpeed Newsletter



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## Applying process improvement to CNATRA contractor logistics support

By the CNATRA T/M/S Team

The Chief of Naval Aviation Training (CNATRA) is charged with the maintenance and sustainment of 760 aircraft – all via contracted maintenance and logistics. The majority

of this fleet of aircraft is over 30 years old (See Table 1, Page 2) and has been identified as a primary cause for recent and unplanned sustainment costs to CNATRA's Operations & Maintenance, Navy (O&M,N) ac-

counts. Because of the key role contractor logistic support (CLS) plays in the readiness and cost to maintain the command's aircraft, a fresh look at its process is war-

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## CRT lead credits crew diligence, data fidelity

*Editors' note: Below is an excerpt from an e-mail written by Capt. Ladd "Wheels" Wheeler, commanding officer, USS Theodore Roosevelt (CVN 71) and Carrier Readiness Team (CRT) lead, voicing his appreciation for his colleagues' support and for their efforts in the Ready for Tasking-Equipment reporting process. His correspondence underscores the importance of data management by all levels of leadership in the Naval Aviation Enterprise.*



Capt. Ladd  
"Wheels" Wheeler

Fellow Aircraft Carrier Commanding Officers,

Right up front, I want to thank you for the support you gave to the Carrier Readiness Team (CRT) this past year. We identified and overcame many challenges in 2009, and are now engaged equally in 2010 with real readiness issues and improvements being researched for all of our benefits. We are wide open to go active on anything that you feel is making your head hurt from a readiness perspective. Send them in!

Thanks in large part to the help from your dedicated crews, one area where we made significant progress was in reducing Ready for Tasking - Equipment (RFT-E) "Impaired Days."

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## Enterprise behavior ashore improves readiness afloat

By the Carrier Readiness Team

Aircraft carriers across the fleet saw the number of impaired days of the top five critical shipboard systems reduced more than 80 percent in Fiscal Year 2009 as a result of a solution executed by the Cost Optimized Readiness-Equipment Pillar (COR-E) team – a unique three-tiered management construct that aligns the team's efforts to member's "day jobs." This approach builds results on linking critical functional areas and levels across the entire carrier maintenance community.

The COR-E team is chartered under the Carrier Readiness Team's (CRT) Life Cycle Management Group (LCMG). Led by Capt. Frank Simei, Aircraft Carrier Programs Office (PMS) 312, the LCMG focuses on current and future mission requirements

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ranted.

Take for instance the unpredicted costs attributed to aging aircraft that have been highlighted on both the T-34C Turbomenter and the T-44A & C Pegasus fleets. As T-34 aircraft age, the adverse affect of corrosion on wing spars has accelerated, especially in the salt-rich environment of Corpus Christi, Texas (where CNATRA is located). Since

available for training now – without adversely affecting the availability of aircraft in the future.

Also, the Navy's T-44 Fleet is undergoing an obsolescence upgrade which is transitioning the cockpit from analog to digital. This was originally a \$48 million effort for 54 aircraft – yet early upgrades revealed fleet-wide wiring degradations that needed to be addressed for the safety and longevity

of the aircraft. The additional wiring modifications incurred an unexpected \$4.5 million in additional cost to the program as well as a projected reduction in aircraft availability to Training Air Wing 4.

While these bills are small relative to the total cost of Naval Aviation, it is the unpredictable nature of them that makes the management of constrained funds challenging. Predictable, opti-

mized sustainment costs are required in today's fiscal environment.

There are additional opportunities for CLS process improvement – especially when looking at the CNATRA sustainment requirement from a whole-fleet perspective. For example, supply chain management is currently being managed separately by each CLS contract – precluding the opportunity for economies of scale and efficiencies of common management. The same is true for depot-level maintenance. A separate depot facility for each CLS contract overlooks the possibility that one industry provider could reduce redundancy and optimize CNATRA depot costs.

These areas of potential savings warrant thorough understanding and a rigorous analysis prior to implementing the next round of CLS contracts.

CNATRA has asked Naval Air Systems Command (NAVAIR) PMA-273 to ensure future CLS contracts enable predictable optimized costs and ensure contractor performance that reliably meets the requirements of CNATRA training throughput.

There are several steps being conducted by NAVAIR to accomplish the direction of CNATRA, but none is more important than the subtle redefinition of the requirement. "The requirement is not to sustain aircraft for the five-year period of performance of the contract," said Capt. Andrew Hartigan, PMA-273, "but to optimize the sustainment of the aircraft for its entire life cycle."

These adjustments can produce long-term results and can be as fundamental as distributing the required flight hours across the entire fleet of aircraft rather than accruing a high number of hours or arrested landings on a subset of the fleet. This would avoid inducting aircraft into the Service Life Extension Program (SLEP) earlier than scheduled.

There are additional early steps underway for CNATRA to redefine the CLS requirement. The first step is to baseline the current material condition of the aircraft so the CLS providers understand exactly what they are contracting to sustain. NAVAIR is also developing a qualitative total life cycle cost model – which will help identify those areas most likely to reap efficiencies in future contracts.

None of this analysis and improvement can be done without the support and expertise of the aircraft sustainment industry. On two separate occasions, NAVAIR has invited industry in to provide input to or comment on the draft *Life Cycle Support Strategy*. Historically, commercial providers have been using improvement tools longer than Naval Aviation and can apply their expertise to optimize costs and deliver required

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Type/ Model/ Series	# Aircraft	Initial Operational Capability	Average Age (years)
T-6	48/315	August 2003	5.5
T-34	279	1975	34
T-44	54	1977	32
TH-57	126	1981	27
T-39	20	1964	40
T-45	205	1992	10.3
TC-12	25	1979	30

2007, over 175 wing spars have been replaced due to the combined effects of corrosion and fatigue.

In addition to aging wing spars, the main load bearing structure of the airframe has been or will be replaced on 92 aircraft due to fatigue life expenditure. These maintenance activities have had a significant negative impact on aircraft availability at both Naval Air Station (NAS) Corpus Christi and CNATRA's flight training facility at NAS Whiting Field in Florida. These impacts have been overcome by innovative operational management by CNATRA and the training air wings.

In January 2010, an additional, unplanned \$3 million was added to the T-34 CLS contract to ensure the minimum required aircraft were

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in support of aircraft carriers' 50-year service life. COR-E is tasked with identifying current platform, system and equipment concerns and exploring mitigation strategies to improve today's readiness (operational availability) and costs. It provides the construct to align the aircraft carrier maintenance community to make rigorous, fact-based and informed decisions that involve PESTO (people, equipment, supply, training and ordnance) Equipment Pillar-related issues today and in the future. The team also engages with other stakeholders on future initiatives and requirements, such as the Joint Strike Fighter integration and interoperability issues.

Under the leadership of the maintenance "triad" (PMS-312, Commander, Naval Air Forces (CNAF N43) and Commander, Naval Air Forces Atlantic (CNAL N43)), COR-E taps resources across the carrier maintenance community to identify,

### **About the Carrier Readiness Team**

To execute its mission on aircraft carriers, the NAE established the Carrier Readiness Team (CRT) under the Current Readiness CFT. The CRT's aim is to efficiently achieve the readiness required of the nation's aircraft carrier fleet and drive results with integrated metrics to enable good resourcing decisions. This is accomplished by focusing on the readiness resource pillars of people, equipment, supply, training, and ordnance (PESTO), and the stand-up of a Continuous Process Improvement - Afloat Team. Together they provide a framework to influence behavior and use a holistic approach to deliver aircraft carrier readiness.

COR-E supports the stated mission of the NAE: "To support Naval Aviation readiness requirements with transparent, cross-functional processes that inform risk-balanced decisions."

"bottom-up" knowledge from diverse team members executing their "day jobs" to pinpoint critical head hurters. The working group level also aligns the CFT and its lead-

analyze, prioritize and mitigate critical readiness "head hurters," equipment cost drivers, and provides a forum for knowledge management and transparency. The COR-E construct consists of both a cross-functional team (CFT) – complete with charter, business rules, metrics and processes – and a disciplined communication structure to assure fact-based, informed decisions.

While its charters, business rules, metrics and common processes are not new, its communication model is one of the first in the NAE to be constructed along PESTO Pillars. Its management construct consists of three tiers. The first is the working group level. It consolidates

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*(Letter continued from Page 1)*

Data gathered and reported via your chains of command allowed the technical community to better understand and address real deck plate issues directly affecting your equipment readiness. Equipment readiness data provided through the matured RFT-E reporting process ensures system command's and type command's efforts are properly focused, that problems directly affecting readiness are analyzed, and that remedial actions are initiated.

The data also supports one of the key PESTO (People, Equipment, Supply, Training and Ordnance) Equipment (E)-Pillar efforts on the Current Readiness Cross-functional Team (CFT), and Air Board Carrier Readiness Bridge Plots, which I brief monthly to Commander, Naval Air Forces Atlantic (CNAL) and Commander, Naval Air Forces (CNAF) as an aggregate across the fleet.

As the RFT-E reporting process is currently structured, each ship has a designated administrator generally employed under the operations officer. This individual reports RFT-E data to the CRT coordinator. The maintenance and technical community then collate, analyze and trend this data to drive corrective actions on critical systems that impact readiness.

For example, between 2008 and 2009, effective implementation of these initiatives resulted in an overall reduction in "impaired days" throughout the carrier fleet, and allowed a recent shift in focus from Aircraft Launch and Recovery Equipment to Command, Control, Communications, Computer, Combat and Information.

This good work is also reflected in recent RFT-E data showing an underway operational availability near 100 percent. Our ongoing goal is to ensure that our reporting and analysis

of data truly reflects your deck plate reality.

An article in the Current Readiness/Enterprise AIRSpeed Newsletter, "Enterprise behavior ashore improves readiness afloat," provides a brief overview of the E-Pillar's Cost Optimized Readiness-Equipment (COR-E) team. (See Page 1.) COR-E is a key enabler in executing 2010 Strategic Initiatives related to the E-Pillar portion of PESTO. COR-E is led by three O-6 maintenance experts from CNAF N43, CNAL N43, and PMS 312 and serves to better align the carrier maintenance community's resources to address critical equipment issues and support NAE Strategic Objective 2.0. RFT-E is one of several key inputs used to achieve COR-E objectives.

As always, we welcome your comments and feedback.

Sail safe,

"Wheels" ■

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performance. The strategy needs to incorporate enterprise behaviors among industry and government entities and encourage industry to invest in and help improve some of CNATRA's processes. This long-term perspective depends upon industry's confidence that they will recoup their investment with a fair and appropriate profit. It will be a challenge to create this relationship in an overall DoD environment insisting on increased competition.

Currently, NAVAIR is still finalizing the Total Life Cycle Product Support (TLPS) model for CNATRA. It is being closely modeled after the DoD Weapon System Acquisition Reform Product Support Assessment signed out by the Office of Secretary of Defense - Acquisition,

Technology and Logistics (OSD AT&L) in November 2009. (Available at: <https://acc.dau.mil/CommunityBrowser.aspx?id=328610&lang=en-US>) PMA 273 and CNATRA are working to implement the new TLPS contract by fiscal year 2012, covering the majority of CNATRA platforms. TLPS is not being designed to reduce costs immediately, but rather to: define the requirement correctly; write the contract well; incentivize industry appropriately; collect the right data; enforce the right metrics; and create predictable, stable operating costs and sustained contractor performance. The end result will optimize CNATRA's long-term total ownership costs and ensure the longevity of the fleet.

The initiatives CNATRA is taking

to increase readiness are the direct result of a candid evaluation of its training aircraft and the identification of problematic issues. Though the recognition of maintenance and sustainment challenges in these aircraft may seem daunting, the indisputable reality is that these challenges must be addressed. But at the same time, they present distinct opportunities for stakeholders. Understanding the strengths and weaknesses of the training fleets has enabled the Navy to progress with an improved maintenance model and enrich its relationships with its contractors.

Addressing the CLS need for improvement ensures that training continues as cost-effectively as possible now and in the future. ■



Damage on corrosion-resistant steel  
high temperature oxide

## “Eating away” at the high cost of corrosion

*Sailors and Marines train to fight foes on land or at sea. However, maintainers are constantly engaged in a battle that does not involve a corporeal enemy but a chemical one – corrosion. The Naval Aviation Enterprise (NAE) Corrosion Prevention Team has been working on a multi-faceted approach to abate corrosion since 2007. The article below chronicles DoD's recent efforts to capture the cost of corrosion and gives an overview of the tactics the NAE is taking against it. Future articles will explore the solutions in greater detail.*

By Jacquelyn Millham  
Current Readiness/Enterprise AIRSpeed Public Affairs

With a price tag of more than \$3 billion and approximately one million Sailor, Marine and artisan maintenance man-hours each year, corrosion has been identified as one of the top three readiness degraders in the fleet.\*

To address this issue, the Naval Aviation Enterprise (NAE) Corrosion Prevention Team is implementing a long-term, comprehensive corrosion mitigation strategy that will reduce man-hour costs, shrink material expenditures and increase the number of aircraft ready for tasking. The team was stood up in 2007 after a dedicated review of how corrosion impacted Navy and Marine Corps aircraft.

Capt. David Randle, Naval Air Systems Command

(NAVAIR) Military Director for Maintenance Planning and Logistics Sustainment, said that before the team was created, maintainers were seeing aircraft throughout the fleet coming in for scheduled maintenance events in worse condition than they expected. “The condition of aircraft inducted into Fleet Readiness Centers (FRC) not only affected their ability to meet delivery schedules, it increased the cost to repair the aircraft,” he said.

One of the first steps taken to mitigate corrosion was to establish expectation criteria for the condition of aircraft and to communicate those criteria. This foundation establishes a baseline for airframe material condition that will reduce maintenance system variation. Without a baseline, it is ex-

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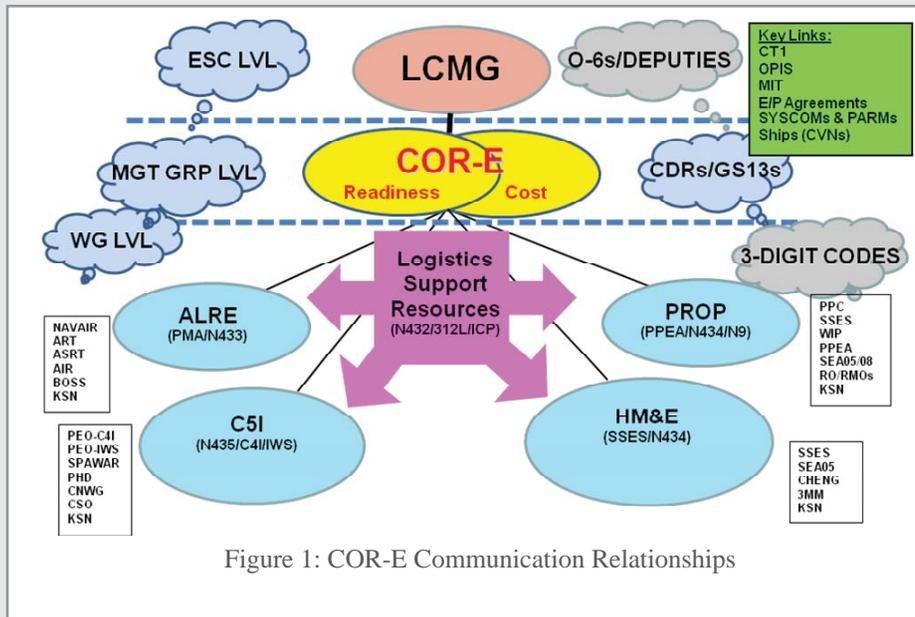


Figure 1: COR-E Communication Relationships

of COR-E divided into five main sub-groups at the working group level: Aircraft Launch and Recovery (ALRE); Propulsion; Command, Control, Communications, Computer, Combat and Information (C5I); Hull, Mechanical and Electrical (HM&E) and Logistics Support Resources. Logistics has a unique supporting role across the other sub-groups and is shown with connecting arrows. Each of the sub-groups has its own lead/co-lead and is in itself a CFT with membership from appropriate system command, ships, type command (TYCOM), program office, etc. as identified in their accompanying membership "box."

ership to assure proper focus on important readiness and cost issues.

The second tier, the middle group level (O-5 / GS-13), provides a forum whereby key individuals in the maintenance community cross-functional team can coordinate, analyze, prioritize and align efforts. Finally, members in the senior group level (O-6 / deputy) exercise their day job through cross-functional and Title X authority to provide top-down direction, high-level prioritization, resource commitment, barrier removal assistance and final informed decision-making.

Graphically, the COR-E construct can be represented through the "Communication Relationships" graphic. (See Figure 1) Recognizing that head hurters can result in both readiness shortfalls and excessive costs, the team routinely reviews both aspects of a problem to provide effective mitigation strategies. Key links to Carrier Team 1 (CT1), Continuous Process Improvement – Afloat (CPI-A), the Manpower Initiative Team (MIT) and others are explored where appropriate. Enabler / provider agreements are implemented when needed to achieve requisite results.

The graphic also depicts the basic work

and meetings, culminating in a report out to the LCMG and the triad. Documentation, progress, status, action items, metrics and other COR-E-related information are posted on the Carrier Team One website for ease of access and to allow for the widest dissemination of information. See: <https://nslcweb37.nslc.navy.mil/CT1COMM/html-docs/teamOneSite/COR-E/COR-E.htm>.

These members bring with them the inherent authority, responsibility and perspective of their parent organizations. Also identified in the box are examples of E-Pillar-related outside groups and relevant conferences. The essence of COR-E's uniqueness is in its ability to tap key

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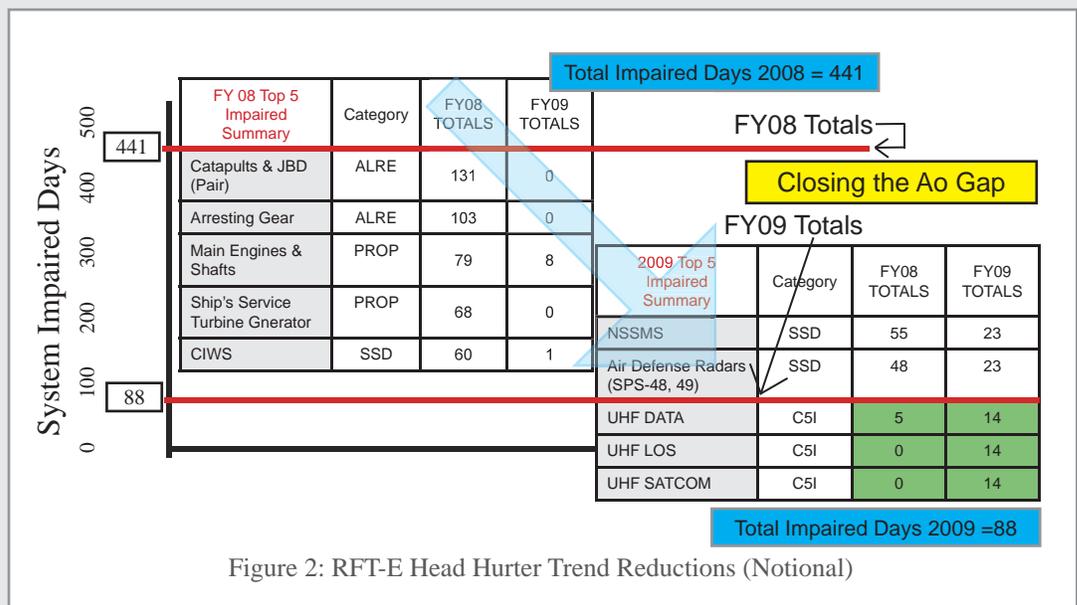


Figure 2: RFT-E Head Hurter Trend Reductions (Notional)

(Corrosion continued from Page 4)

tremely difficult to target improvement activity and measure results; to determine “should be” costs for comparison to actual costs; and to capture material performance needed for improvement to aircraft design.

The Corrosion Prevention Team also looked at how to coordinate and support other similar initiatives and



Corrosion on aircrew escape system structural tubes

processes, such as the Marine Corps’ Reset Program, NAVAIR Materials Engineering Division’s Future Readiness project, Integrated Maintenance Concept, Reliability-Centered Maintenance, the Work Load Standards process, Distance Support, and AIR-Speed initiatives.

The team is comprised of subject matter experts from Commander, Naval Air Forces (CNAF); Commander, Fleet Readiness Centers (COMFRC); type wings; the NAVAIR Research and Engineering Competency, the NAVAIR Logistics and Industrial Operations Competency; Center for Naval Aviation Technical Training (CNATT); Naval Air Technical Data and Engineering Service Command (NATEC); and Program Office Fleet Support Teams (FST). They are working on changes to the Naval Aviation Maintenance Program, on FRC maintenance processes, and on improving data capture across all of naval aviation.

The five-prong approach to reducing aircraft corrosion includes:

- Developing Focus Area Lists that highlight corrosion “hot spots” for all type/model/series based on its frequency of occurrence and how much it costs to repair. To date, Focus Area Lists have been fielded for the F/A-18, E-2/C-2, and H-53. A Focus Area List for the H-60 is under development, and the EA-6B and P-3 are planned for later this year.
- Standardizing data collection fleet-wide. Currently, Naval Aviation does not have a feedback mechanism for data collected at material condition inspections. In the future, depot-level estimators and evaluators

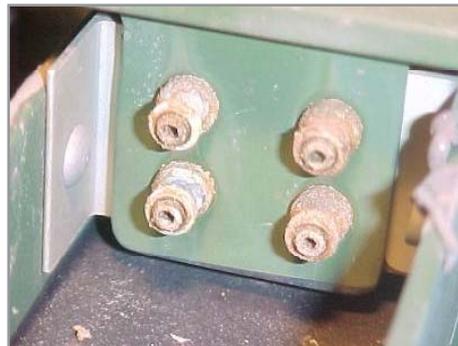
will show fleet wing inspectors how they inspect and grade an airplane for corrosion and record it in the Automated Data Capture System (ADCS), so that consistent standards and data collection are in place.

- Providing training to the workforce on corrosion prevention, identification and treatment. The team had subject matter experts conduct a training gap analysis to identify gaps between what Sailors and Marines are expected to know and what training is available across the training continuum. Improving aircraft design and materials. The idea is that by improving the materials from which aircraft are constructed corrosion issues will

diminish over time. One strategy is to place conductive gaskets underneath aircraft antennae to virtually eliminate corrosion there. Another example is Low Temperature Carbon Super Saturation (LTCSS), which embeds carbon into the surface of stainless steel, improving corrosion resistance by several orders of magnitude without affecting the tensile strength of the steel. Another possible solution being explored by a team at the Defense Advanced Research Projects Agency is structurally amorphous metals that lack a crystalline structure, eliminating the fractal planes that are often the starting points for corrosion. The team is also working with other commands, industry, and institutions of higher learning to improve the material selection and corrosion resistance of new platforms.

Communicating to warfighters to ensure they are aware that they are the first line of defense against corrosion. This includes the NAE Air Plan that goes to all Sailors and Marines in the NAE (available at [https://www.portal.navy.mil/comnavairfor/Naval\\_Aviation\\_Enterprise/Air%20Plans/Forms/AllItems.aspx](https://www.portal.navy.mil/comnavairfor/Naval_Aviation_Enterprise/Air%20Plans/Forms/AllItems.aspx)), and working with CNAF on Aviation Maintenance Advisories (AMA) that clarify maintenance policy.

“We have made significant gains since the Corrosion Prevention Team first met, but this is just the start,” said Randle. “This comprehensive strategy and continued collaboration and



Corrosion on fuel tank fasteners

coordination by all stakeholders at all levels in the NAE will enable us to better focus our resources in the future.” ■

\* - Data from a 2008 LMI study commissioned by OSD Office of Corrosion Prevention and Control.

# CPI practitioners share lessons learned, strategies and toolsets

By Nicole Morgan Clark, NAVAIR AIRSpeed Communications  
Photos by Jacquelyn Millham, Current Readiness/Enterprise AIRSpeed Public Affairs

Approximately 485 continuous process improvement (CPI) practitioners descended on San Diego in February to share their success stories and learn new techniques to serve the warfighter more efficiently.

The conference, themed “Transforming Our Business, Generating Results,” was held between February 2-4 and attracted attendees from all levels of government from locations nationwide. Dozens of workshop top-

ics ranged from selecting the best CPI projects to managing cultural risks, applying systems thinking to your CPI deployment, change and the public sector, and a Navy readiness review.

“It was a great conference, probably the best so far,” said Chris Cummings, director of CPI for Corporate Operations (AIR-7.0). She gave the Marine Corps kudos for successfully implementing CPI with a “top-down” approach. And, she learned techniques that will not only help seasoned

CPI practitioners increase and sharpen their own skills, but help them teach and mentor new practitioners.

But, for Cummings, the highlight of the symposium was a session titled, “Lean Saves Lives.” A commander used Lean Six Sigma, a problem-solving technique designed to remove waste and improve the flow of work, to outfit more troops with armor-protected vehicles, Cummings said.

Before those improvement efforts,

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maintenance community activities (not just organizations) to assure complete visibility and transparency for all maintenance related issues. The key is alignment and transparency across all community lines.

## RFT-E Data and Impaired Days

To assure the team is targeting the right readiness and cost head hurters, a process was developed to reach directly down to operational carrier deckplates to identify relevant problems. Ready-for-Tasking – E Pillar (RFT-E) data is recorded daily on all carriers by deckplate Sailors and reported up the ship’s chain of command to the RFT-E data coordinator. (See Figure 2, Page 5) The data is collected, collated, trended and reported to COR-E sub-groups monthly. Key RFT-E data is also a metric reported to the flag level on the monthly CRT Bridge Plot chart.

RFT-E monitors approximately 78 critical systems and their key equipment or components. When specific equipment or combinations of equipment are not in a condition to support a potential tasking, RFT-E will report an

## The Way Forward – FY10 and Beyond

The NAE has developed a number of Strategic Objectives (SO) for Fiscal Year 2010. SO 2.0, which Current Readiness is responsible for, states: “Engage all Naval Aviation readiness stakeholders and stakeholder organizations to drive efficient delivery of combat ready forces to meet current and future operational requirements.”

Under SO 2.0, the NAE has identified six Strategic Initiatives (SI) intended to better understand readiness entitlement, cost of readiness, how it is provided and by whom.

As they relate to the PESTO E-Pillar, COR-E will support several of these initiatives. Specifically:

- **2.2:** Establish E-Pillar readiness requirements in Defense Readiness Reporting System – Navy and link to Operating and Support (O&S) costs.
- **2.3:** Identify and mitigate E-Pillar gaps to meet warfighting readiness requirements.
- **2.4:** Understand and manage E-Pillar related O&S costs.
- **2.5:** Optimize service life management and logistics process.
- **2.6:** Improve the management of transitions from legacy to new weapons systems across all readiness and logistics resource areas.

“impaired” day. Equipment can be out of commission (OOC) without impairing the carrier’s ability to complete its tasking; however, the equipment is still reported as OOC so that the data can be analyzed by COR-E.

In addition to RFT-E data, casualty reports, Trouble Systems Program (TSP) data, life cycle issues and routine “day job” problems being worked by TYCOM force engineers, ship force maintenance action requests from technical warrant holders (TWH), in-service engineering agents (ISEAs) and other system managers are reviewed and prioritized to include relevant issues, avoid duplication of effort and/or gaps and to assure transparency across the technical community.

As COR-E continues to grow and mature, it will bring alignment, visibility

and relevance to the maintenance community’s “day jobs.” Through transparent, cross-functional processes that inform risk-balanced decisions, COR-E will provide a clear understanding of requirements, costs and gaps to assure Naval Aviation readiness is fully met. ■



Photos: (upper left-hand side) A continuous process improvement practitioner sounds a bell after she finishes folding a paper airplane during an exercise on the Theory of Constraints. The activity showed participants how constraints limit the throughput of a process and how to apply strategies to overcome them. (Middle photo) Two CPI practitioners learn about team dynamics and how to better leverage team members' strengths. (First, second and third photo, bottom, right-hand side) Rear Adm. Michael Bachmann, Commander, Space and Naval Warfare Systems Command, presents Master Sgt. Philip Wrey, Marine Aviation Logistics Squadron (MALS) 11's AIRSpeed senior non-commissioned officer in charge, the Enterprise AIRSpeed Site of the Year "Battle A" award; Gunnery Sgt. Thomas Hopkins, MALS-24's AIRSpeed chief, the 2009 Enterprise AIRSpeed Leader of the Year award; and AZ1 Aron Davis, FRC West Site Lemoore's Performance Improvement Branch leading petty officer, the 2009 Master Gunnery Sergeant John Evancho Innovator of the Year award.

she said, many of those troops took chances with their lives rather than spend most of the day having their vehicles outfitted. With the CPI improvements, she explained, they had more of a "Jiffy Lube" turnaround time.

"It really brought home a lesson that CPI can save lives in a war zone," said Robert Cobb, a financial management specialist in the Pax River AIRSpeed office. Cobb, who made a presentation about CPI financial data, said the conference also helped him, "see the big picture - how CPI can help here at NAVAIR and help the entire Navy meet demands with a constrained budget."

James Greenfield, a member of the Logistics and Industrial Operations (AIR- 6.0) CPI Integrated Product Team, said that teams can help meet increasingly stringent budgetary and staffing requirements, even with a shrinking bottom line, by using the right CPI tools. "But," he added, "if CPI as a culture is going to survive, it

has to maintain a top-down approach, meaning high-level managers need to increasingly hold mid- and lower-level managers accountable for implementation."

Greenfield, Cobb, Cummings and Debra Borden, a NAVAIR Master Black Belt based in China Lake, all referred to a top-level budget presentation from senior leadership from the Chief of Naval Operations. Borden said, "we were tasked to ask ourselves why we work the way we do and why does it cost what it costs." It made an impact, Borden said. "They sounded the alarm on the pending budget crisis," she said.

"It appears that there is support from the highest levels of leadership to pursue continuous improvement," Borden added. "The experience of attending the workshop has re-energized me. I left the conference feeling that I can make a difference in reducing waste in the execution of the programs that support the warfighter." ■



## Links of interest

- 1. DoD releases Defense Reviews, 2011 Budget Proposal, and 2010 War Funding Supplemental Request**  
Transcripts from applicable budget and strategic defense review briefings can be viewed here:  
<http://www.defense.gov/releases/release.aspx?releaseid=13281>
- 2. The Quadrennial Defense Review**  
The Quadrennial Defense Review (QDR), a legislatively-mandated review of Department of Defense strategy and priorities, sets a long-term course for DoD as it assesses the threats and challenges that the nation faces. It re-balances DoD's strategies, capabilities and forces to address today's conflicts and tomorrow's threats.  
<http://www.defense.gov/qdr/>  
This **Rhumb Lines** provides a synopsis of the plan: <https://n1.fcc.navy.mil/tools/get.aspx?ID=161>
- 3. The President's Budget for Fiscal Year 2011** is available at: <http://www.whitehouse.gov/omb/budget/>
- 4. The 2011 DoD Budget Proposal**  
The entire Fiscal Year 2011 DoD Budget Request is available at: <http://www.budget.mil>.
- 5. The Fiscal Year 2011 Department of the Navy Budget Materials** can be view at:  
<http://www.finance.hq.navy.mil/fmb/11pres/BOOKS.htm>  
Read about the budget's highlights in this edition of **Rhumb Lines**:  
<https://n1.fcc.navy.mil/tools/get.aspx?ID=162>
- 6. Daily News Update**  
This video features Secretary of Defense Robert Gates discussing the Department of Defense 2011 Defense Budget Request and the 2010 Quadrennial and Ballistic Missile Defense Reviews.  
<http://www.navy.mil/swf/mmu/mmplyr.asp?id=13884>
- 7. Fleet Readiness Center Southwest's Almanac** – January/February 2010  
Read about how FRCSW became the first naval command to achieve Aerospace Standards (AS) 9100 and 9110 certifications.  
<https://n1.fcc.navy.mil/tools/get.aspx?ID=154>
- 8. CVN Continuous Process Improvement Instruction**  
This instruction formalizes the requirement and identifies the processes by which the aircraft carriers will instantiate their CPI afloat efforts.  
<https://n1.fcc.navy.mil/tools/get.aspx?ID=149>
- 9. Centennial of Naval Aviation Newsletter**  
Volume 2, Edition 1 is now available on Facebook.  
<http://www.facebook.com/flynavy>
- 10. Naval Air Systems Command rolls out its redesigned public web site.**  
Click on the link below to take a look.  
[www.navair.navy.mil](http://www.navair.navy.mil)
- 11. NAVAIR Vector**  
Read about Fleet Readiness Center East (FRC-E) and how the maintenance activity received a V-22 Osprey

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straight from Iraq, fixed and returned it to the Marines almost a month ahead of schedule. FRC-E is also standing up a new repair facility to perform onsite V-22 blade repair.  
[https://homepages.navair.navy.mil/itim/2010/Vector\\_27Jan10.pdf](https://homepages.navair.navy.mil/itim/2010/Vector_27Jan10.pdf)

**12. Lean manufacturing reference materials**

This U.S. Environmental Protection Agency web site contains links to downloadable CPI resources.  
<http://www.epa.gov/lean/pubs.htm>

**13. NAVSEA's *Who's On Watch* - January 2010 issue**

Read about how Naval Undersea Warfare Center Newport's Undersea Warfare Electromagnetic Systems Department, Code 34 Submarine High Data Rate National Maintenance Center uses continuous process improvement tools to improve equipment and testing processes.  
<https://n1.fcc.navy.mil/tools/get.aspx?ID=160>

**14. FRCSE returns unique P-3 "Billboard" Orion to Fleet**

A heavily modified NP-3D "Billboard" Orion with its distinctive radar panel was recently reintroduced to the fleet thanks to the efforts of artisans at Fleet Readiness Center Southeast. The aircraft's newly-installed over-the-horizon telemetry assists the receiving squadron, Naval Weapons Test Squadron 30, based in Point Mugu, Calif., with its vital mission of clearing the Pacific Missile Test Range, the Department of Defense's largest overwater missile test range with 36,000 square miles of controlled sea and airspace.  
[http://www.navair.navy.mil/press\\_releases/index.cfm?fuseaction=press\\_release\\_view&press\\_release\\_id=4264&site\\_id=7](http://www.navair.navy.mil/press_releases/index.cfm?fuseaction=press_release_view&press_release_id=4264&site_id=7)

**15. U.S. Navy recognized as one of the world's best training organizations by *Training Magazine***

The publication ranked the Navy 17th on its list of Training Top 125 for 2010.  
[http://www.navy.mil/search/display.asp?story\\_id=51066](http://www.navy.mil/search/display.asp?story_id=51066)

**16. X-47B Unmanned Combat Air System Taking Shape On Board Lincoln**

The integration of existing ship systems with new systems that will support the X-47B Unmanned Combat Air System Demonstration was recently tested aboard *USS Abraham Lincoln* (CVN 72)., This is one of the first steps in the X-47B's integration into the carrier's systems.  
[http://www.navy.mil/search/display.asp?story\\_id=51239](http://www.navy.mil/search/display.asp?story_id=51239)

**17. VAQ 141 Holds 'Safe For Flight' Ceremony for Growler**

The "Shadowhawks" of Electronic Attack Squadron (VAQ) 141 held a flyover and a ceremony commemorating their designation of "Safe for Flight" in the EA-18G Growler. They are the second operational squadron to have achieved the qualification after the "Scorpions" of VAQ-132.  
[http://www.navy.mil/search/display.asp?story\\_id=51309](http://www.navy.mil/search/display.asp?story_id=51309)

**18. Rhumb Lines**

- **Littoral Combat Ship Independence Commissioned; Freedom Deploys**

This Rhumb Lines highlights two significant milestones in the introduction of Littoral Combat Ships to the Navy - the recent commissioning of *USS Independence* (LCS 2) and the upcoming deployment of *USS Freedom* (LCS 1).  
<https://n1.fcc.navy.mil/tools/get.aspx?ID=141>

- **The Navy Supply Corps ... Celebrating 215 years of vital supply and logistics**

The Navy Supply Corps celebrated its 215th birthday on Feb. 23; this Rhumb Lines reflects on how the Supply Corps plays a vital role in executing the Navy's Maritime Strategy  
<https://n1.fcc.navy.mil/tools/get.aspx?ID=147>