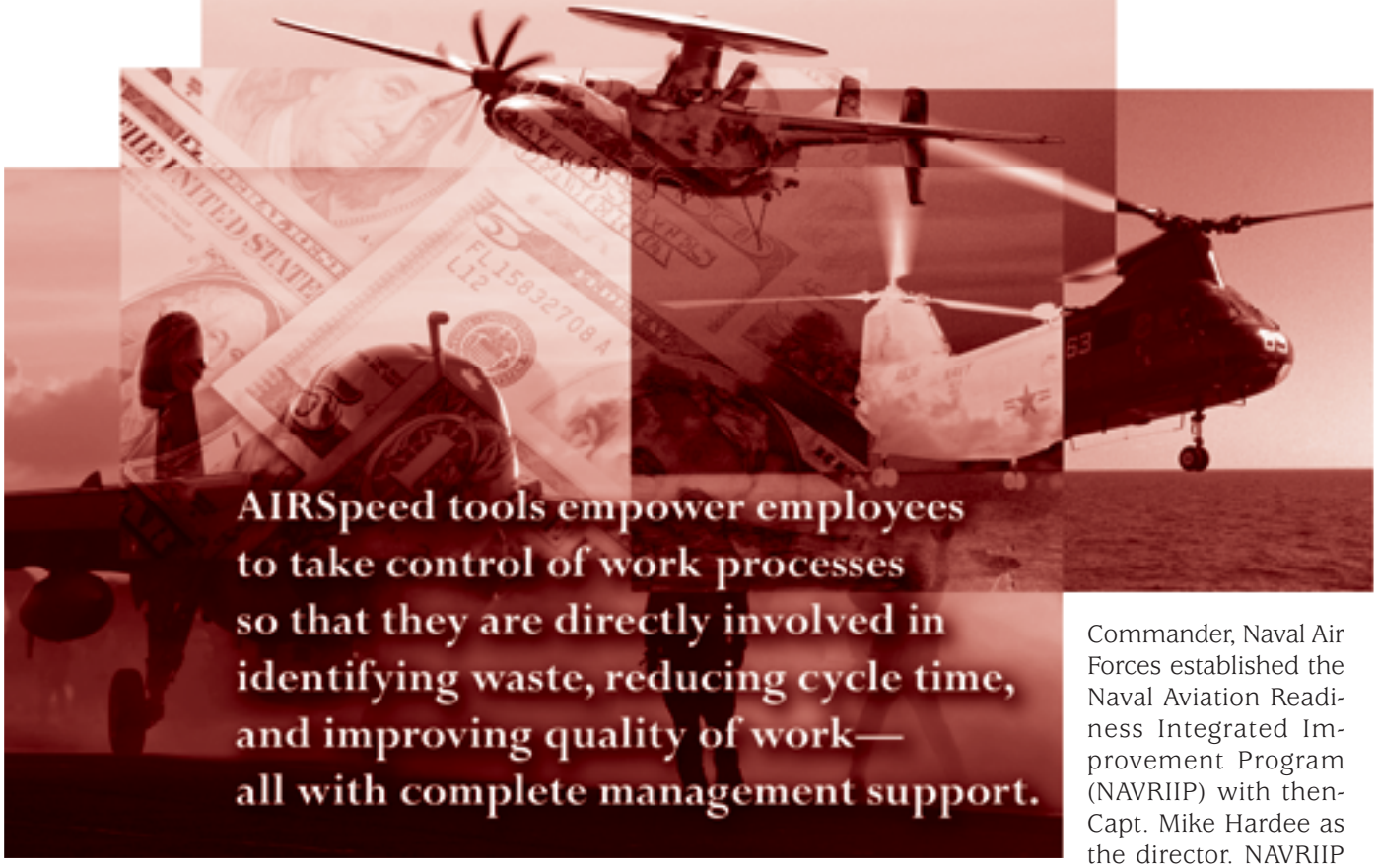
The Right Readiness at the Right Cost

A Naval Aviation Enterprise Journey

Will Broadus ■ Duane Mallicoat, with Rear Adm. Michael D. Hardee, USN



Like all Services within the Department of Defense, the Navy/Marine team was facing a readiness challenge. The chief of naval operations had directed a new fleet response plan to support fleet operations in the global war on terrorism. That meant the Naval Aviation Enterprise would have to support current levels of readiness while facing a budget shortfall. With an increase in operational tempo and the associated growth in the flying-hour program, Navy and Marine Corps unit commanders would conduct operations in a cost-wise readiness environment.

In October 2001, in response to this need, the Naval Air Systems Command (NAVAIR), in conjunction with the Commander, Naval Air Forces established the Naval Aviation Readiness Integrated Improvement Program (NAVRIIP) with then-Capt. Mike Hardee as the director. NAVRIIP evolved into what is now AIRSpeed, a philosophy, strategy, and proven set of tools that will enable NAVAIR and the Naval Aviation Enterprise to achieve cost-wise readiness. It is a means of reducing the cost of doing business, improving productivity, and increasing customer satisfaction.

Empowering with AIRSpeed Tools

AIRSpeed tools empower employees to take control of work processes so that they are directly involved in identifying waste, reducing cycle time, and improving quality of work—all with complete management support. The central tools for AIRSpeed are

- **Lean**, which eliminates waste and streamlines the number of steps in a workflow process

Broadus *is a DAU professor of systems engineering and acquisition management.* **Mallicoat** *is a DAU professor of life cycle logistics and acquisition management.* **Hardee** *is the commander, Fleet Readiness Centers, centered at NAVAL Air Systems Command, Patuxent River, Md.*

- **Six Sigma**, which uses statistical analysis to eliminate variation between what we deliver and what the customer expects
- **Theory of Constraints**, which eliminates process constraints so the workflow can focus on efficient operations.

They are well-known and capable tools, but to apply them effectively, AIRSpeed relies upon a methodology called DMAIC: **D**efine, **M**easure, **A**nalyze, **I**mprove, **C**ontrol. To understand how this framework promotes a standardized approach to improvement of processes across the Naval Aviation Enterprise, let's look at the elements more closely.

Define
Defining the problem begins with identifying the core business process being transformed, including where the process starts and stops. Further, it includes identifying the customer(s), what specific products and/or services they receive, and their specific requirements for those products and services.

Measure
The baseline performance of the core business process being transformed must be measured. It's necessary to develop a data collection plan for the process, collect data from many sources to determine current process performance, and compare this information to customer requirements to establish the process performance shortfall.

Analyze
The process is analyzed to determine the root causes for the current process performance shortfall. The root causes are prioritized based on the contribution to the process performance gap identified previously.

Improve
Improving the target process entails designing creative, innovative solutions to resolve the identified root causes.

Control
Finally, the improvements must be controlled to ensure the improved process continues to deliver the expected results. This involves developing and deploying an implementation plan, institutionalizing the improvements, and preventing a reversion to the "old way" by developing and implementing an ongoing process monitoring plan and standard operating procedures, among other tools.

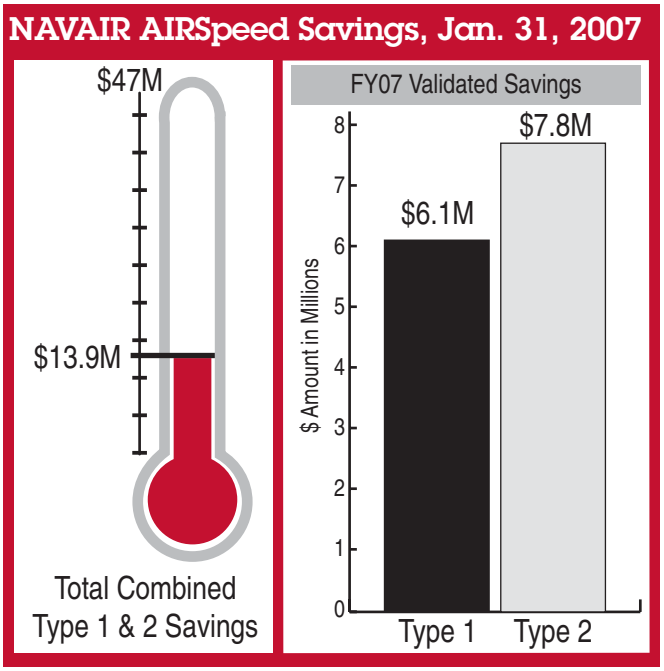
Forging Stakeholder Relationships
But as we have all learned many times before, success is not driven solely by the processes, but by the interaction with the stakeholders in the process. With the stakeholder focus in mind, we visited Rear Adm. Michael D. Hardee, the commander of the Naval Aviation Enterprise Fleet Readiness Centers, to discuss AIRSpeed and stakeholders. Hardee's comments provided a wide range of insights into the importance of stakeholders in a change-driven environment.

A theme that runs throughout the DMAIC methodology, reflected in Hardee's comments, is the importance of stakeholders and the relationship that must exist to define and facilitate the numerous project changes required by a program such as AIRSpeed to achieve real, measurable improvements.

This theme aligns well to that of the Defense Acquisition University's stakeholder framework taught in the ACQ-452 Forging Stakeholder Relationships course: Understand who your stakeholders are; determine their and your programmatic and personal needs, expectations, and outcomes; assess what level of power and involvement they have relative to you; determine how best to establish and maintain a genuine stakeholder relationship; and provide the means to evaluate, improve, and refresh the relationship. (The course is described under "Spotlight on DAU Learning Resources" in the September-October 2007 issue of *Defense AT&L*.)

So from a senior management perspective, what is the stakeholder challenge for leadership when tackling a project of this magnitude? Hardee provided the following lessons learned and best practices applicable to the Naval Aviation Enterprise and AIRSpeed journey.

"Tell me how I am measured, and I'll tell you how I'll behave."
AIRSpeed involves a culture change where every local decision is aligned to its global impact on the organization and its stakeholders. Changing the culture involves chang-



From Our Readers

EVMS: The Time-Lag Issue

I'm a great believer in the potential of Earned Value, and in "EVMS for Dummies" in the September-October issue of *Defense AT&L*, Wayne Turk provides us with a good article, clear and simple. The one thing that Mr. Turk neglected to point out is an inherent problem with EVMS (one typical of all program monitoring efforts). There is generally a time lag between when work is being performed and when the data are available for this work, made even worse with a further lag before EVMS reporting is conducted and then analyzed. When the time lag is too long, a situation can head south in a hurry leaving PMs scratching their heads and wondering what happened. PMs need to be aware of this built-in problem and look to see about reducing the lag so that EVMS can be a more effective tool in keeping programs on track. On the bright side, modern technology, if used to best effect, is helping to reduce this problem.

Alexander R. Slate, DAF
SAF/AQXD

The author responds: *I couldn't agree more. The longer the lag time, the less useful the information. Projects have to keep that lag time to a minimum. However, for most projects, the PM should be able to get usable data on a reasonable timeline. Extremely large programs may have a problem, and I don't have a good solution for timely data to help them. EVMS is still a necessary and useful tool for the large program PM, as well as for those managing smaller projects.*

Communications in Source Selection

I'd like to thank Alexander Slate for his efforts putting together the "Source Selection: Communicating with Offerors" article in the September-October issue. Its brevity provides a wonderfully useful introduction to the process. I have personally used it in preparing for a pending Mode S Testing Center request for proposal in cooperation with MLL Consulting. It is so helpful for a small business to be able to find succinct, high-level information about these processes.

Tony Robinson, President
Pressing Enterprises, Inc.

ing behavior, and changing behavior involves applying relevant measurement pressure to influence behaviors that will, in turn, effect a culture change. The metrics that measure and influence behavior are inventory, reliability, cycle time, and cost reduction.

With the culture of AIRSpeed, we can leverage proven industry practices to make measurable improvements in productivity/effectiveness. Systems engineering approaches force us to think more globally, from a system-of-systems perspective, in order to support the enterprise goals. I've realized that this isn't just about us, especially if we are truly interested in the right external results. Given that, continue to ask for extreme clarity on exactly *what* problem you and the teams are working together to solve. The troops deserve clarity of purpose. Get an agreement to manage problems not through fear, but through knowledge of the facts that drive the right external results for the organization.

"Create a high-trust support group."
Surround yourself with the best: core staff, industry mentors, grey beards, think tanks, contractors, and subject-matter experts from throughout the organization (horizontal and vertical).

"Engage in the process."
Remember, your stakeholders are horizontally and vertically aligned with you: senior leadership, middle management, and the deckplate level. It is important to engage

NAVAIR Fleet Readiness Centers' Contributions to Weapon System Readiness

FRC Southeast

P-3 program reduced turnaround time by 24 days and reduced work in progress by five aircraft

EA-6B program reduced work in progress by eight aircraft and reduced cycle time by 18 percent

FRC East

H-46 program reduced turnaround time by 35 days

H-53 program reduced turnaround time by 145 days

FRC Southwest

F/A-18 PMI 1 program reduced turnaround time by 50 days and reduced work in progress by 12 aircraft

E-2 PMI 2 reduced turnaround time by 20 days and PMI 1 reduced turnaround time by 65 percent

them all in the process and establish relationships with a view to maintaining them as organizational assets:

- Use positive reinforcement that rewards risk takers who deliver results.
- Ensure that empowered participants are part of the team.
- Ensure that those responsible for using analysis tools during events understand their roles and responsibilities.
- Compute a "Figure of Merit" for each gap-closure action.
- Share "Cycles of Learning" throughout the organization: Push that information out; don't wait for it to be pulled—you need to celebrate and popularize successes (horizontal and vertical).
- And be prepared to learn from getting lost.

"Don't just be the change, *lead* the change that will shape behavior."

Leverage existing process improvement initiatives as you shift to a customer demand-based pull system. Use time to reliably replenish process cycle time and work in progress as your metrics in transparent displays of knowledge management. Use inventory buffers based only upon customer demand.

"Know what's getting in your way."

Establish cross-functional teams to determine best designs and outcome intent, and create innovation cells focused on removing stumbling blocks. It is important to determine what functions need to be included, not what activity. Functions produce products/results; activity doesn't always. In addition, create barrier-removal teams to attack barriers and implement solutions, brainstorming those solutions to close performance gaps and establish an atmosphere of fixing the problem, not the blame. Prioritize barrier-removal activities, and attack the barriers in sequence. Manage the flow of work by importance, not urgency—this is a hard one, but it's critical.

"In the end, only three things matter: knowledge, execution, and results."

By managing your stakeholders and their expectations you will find that AIRSpeed:

- Engages all your stakeholders
- Builds cross-functional teams
- Improves communication
- Develops a coherent mapping process
- Identifies and removes non-value-added steps
- Identifies, ranks, and prioritizes constraints and barriers that really matter
- Implements, plans, and installs integrated metrics
- Capitalizes on commercial best practice tools
- Returns cost savings for recapitalization.

The Report Card on AIRSpeed So Far

The program set a goal of achieving $47 million dollars this fiscal year in either Type I or II benefits. Type I benefits are hard savings—permanent cost reductions identified to budget line items; Type II benefits are soft savings—potential cost reductions from decreased cycle times or improved equipment/space utilization. The graphic on page 21 shows the progress made towards this goal as of January 2007.

All savings can ultimately be expressed in terms of cost, but understanding the perceived value of AIRSpeed is sometimes better expressed in terms of performance improvements associated with turnaround time, numbers of aircraft processed during a period of time, or decreases in work in process. The performance of the NAVAIR Depot contributions to weapon system readiness as of October 2006 is summarized in the sidebar on the preceding page.

The ultimate goal of AIRSpeed is to make a lasting and profound logistical and cultural change in the way we do business (operations, maintenance, and supply) across the entire Naval Aviation Enterprise. Leadership, including effective stakeholder management, is the key to the success of AIRSpeed and the viability of Naval Aviation for the future.

There is a wealth of information not only on processes and tools, but also on AIRSpeed successes at < www.navair.navy.mil/navairairspeed > .

The authors welcome comments and questions and can be contacted at william.broadus@dau.mil and duane.mallicoat@dau.mil.