

## AVIATION WEEK EXECUTIVE ROUNDTABLE

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# FLEET READINESS AND PERFORMANCE-BASED LOGISTICS SUMMIT

**Hosted By:**

Gen. Gregory S. "Speedy" Martin  
Commander, U.S. Air Force Materiel Command  
and David Pauling  
Asst. Dep. Under Sec. of Defense,  
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Military and industry leaders met April 18 in Texas for the third Aviation Week Executive Roundtable: Fleet Readiness and Performance-Based Logistics Summit. The summit, sponsored by UGS, a leader in A&D product life-cycle management, was hosted by U.S. Air Force Gen. Gregory S. “Speedy” Martin and David Pauling, assistant deputy under secretary of defense for materiel readiness and maintenance policy.

Although Gen. Martin was one of the official hosts, the roundtable participants included representatives of the U.S. Navy, Marines and Army, as well as their suppliers. The participants reflected joint military cooperation and collaboration among companies to achieve common goals.

The summit was the third in a series of Aviation Week Executive Roundtables.

Tim Nichols of UGS noted that common knowledge management for new platforms, such as the F/A-22 and F-35 Joint Strike Fighter, coupled with efforts such as the Air Force’s eLog21/ECSS, offer the greatest potential in logistics interoperability, sustainment and global autonomy.

“There is a critical need for immediate access by all stakeholders to comprehensive, accurate knowledge that is synchronized across the global logistics networks. This drives down total costs, reduces the time a weapons system is off line and accelerates the introduction of new technologies and upgrades,” Nichols said. “This is the issue we collectively must address with specific, actionable recommendations.”

Pauling outlined the challenge: create a defense capability that achieves “SEMR.” His reference was to Sustained Effective Material Readiness, defined as increasing the availability of weapons systems and reducing the time required to return a system to availability.

In real terms, Pauling wants to drive the materiel readiness/maintenance spend level from the current \$60 billion to \$48-50 billion annually and to improve the turnaround time on system upgrade/maintenance by 30 percent. “We need you, as an industry, to come to us with a plan to achieve this,” he said.

The common belief that reducing spending will kill the industry was a major discussion point. Pauling noted that some type of return—a percentage of savings allocated as investment in technology “stretch” or innovation and insertion—must be identified to make performance improvements a reality. Results, not repair, become the imperative.

Gen. Martin, commander of Air Force Materiel Command (AFMC) at Wright-Patterson AFB, took Pauling’s challenge to an operational level in his discussion of performance-based logistics (PBL). “Everyone uses the term, but they all have a different view,” Martin said. “Using the term allows them to be a part of the conversation.”

Gen. Martin noted that while the expectation is results-

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based performance, those negotiating the contracts—on the part of the military and from industry—had not been made fully aware of how to implement the new contracting models. “There must be a clear articulation of performance goals, of metrics, of the organizational structure, of the chain involved in making changes ... and clear identification of the incentives for suppliers to work with us.”

Gen. Martin’s presentation also underscored the importance of accurate data and metrics in taking quick action—“knowing which lever” to pull to make decisions and achieve the needed result. The digital thread of integrated digital environments, which begins pre-contract and runs through the protracted life cycle of a system, will be the single source of critical fleet knowledge for a global coalition of warfighters and contractors.

## DEFINING PBL

PBL defines performance requirements in terms of readiness and cycle time for maintenance and upgrades. It

also defines who the owner is, who the user is, includes metrics, identifies the organization achieving the logistical goals and describes oversight methods.

### PBL GOALS

- Increase operational availability
- Decrease cost per unit usage
- Decrease logistics response time
- Increase operational reliability
- Decrease logistics footprint
- Avoid obsolescence

The goal of PBL is a 10-percent reduction in annual operating support cost by FY2011, and a 20-percent increase in equipment/system availability.

For the U.S. Air Force, the goals have been developed at the next operational level. In terms of Air Force Materiel Command initiatives, based on the work of AFMC under Gen. Lester Lyles and by Gen. Martin, the goals are:

<b>Depot Maintenance Transformation</b>	<b>Purchasing and Supply Chain Management</b>	<b>Product Support Campaign (draft)</b>
<ul style="list-style-type: none"> <li>• 25% decrease in flow days</li> <li>• 100% on-time delivery</li> <li>• 10% decrease in costs</li> <li>• 20% increase in aircraft availability</li> </ul>	<ul style="list-style-type: none"> <li>• 50% drop in sourcing cycle time</li> <li>• 20% increase in supply materiel availability</li> <li>• 20% decrease in purchase and repair dollars</li> </ul>	<ul style="list-style-type: none"> <li>• 10% decrease in life-cycle costs</li> <li>• Projected actual life-cycle costs within 10% of bid</li> <li>• 20% increase in weapon system availability</li> </ul>

Aviation Week Executive Roundtable participants were challenged to develop a contract template for performance-based logistics that:

- Defines the appropriate level of system/subsystem/item to be included in a performance-based contract.
- Establishes collaboration between end-user and supplier with regard to systems engineering and performance-based logistics.
- Creates incentives for the insertion of new technology, particularly on older aircraft.
- Ensures a role for small business, where much innovation and creativity takes place.

- Identifies the barriers to technology transfer that enables the system approach—between companies, military branches, agencies and countries.

Among the concerns for lead systems integrators or OEMs is original intent for global participation and the reality of technology-transfer decision-making. Global partners want a meaningful role on major systems, beyond bending metal. However, the reality of technology-transfer decision-making creates a breach in the contracting process. Participants noted that licensing agreements need to be clarified as part of the process of defining PBL. Gen. Martin mentioned that Congressional committees are reviewing technology-transfer issues as part of trade considerations. This links directly to previous roundtable action items to identify the cost to the U.S.—in speed, in dollars, in affectivity and in credibility—of seeking global collaboration and then backing off due to conflicts between U.S. diplomacy and U.S. trade strategies.

### THE OUTCOMES

Six tables of participants addressed the components of establishing a meaningful PBL approach. Table leaders included David Pauling; Russ Sparks, president and CEO of military systems operations for GE Transportation; John Phillips, vice president of military support programs, The Home Depot; Tom Burbage, vice president and general manager of Joint Strike Fighter integration, Lockheed Martin Aeronautics; David Nagy, vice president and IPT leader, Northrop Grumman; Charles T. “Tony” Robertson, vice president of Air Force systems support, Boeing Integrated Defense Systems; and Tim Nichols, UGS.

One function of the discussion groups was to establish shared concern for common goals: Participants quickly arrived at a common understanding and shared views:

- PBL implies wider consideration than that of product/system alone—partnering, international collaboration, ability to change mission, ability to insert new technology, etc.—during the contract phase.
- The military or agency “owner” of a contract needs to determine its level—system, sub-system or item.
- Metrics must influence results vs. repairs to include modeling to determine the cause-and-effect impact to metrics.
- A new method of ensuring small business develop-

ment/share of work is needed—instead of percentage, perhaps flow-through of actual dollars.

- Industry needs to move to managing a weapons system as a business vs. selling parts.
- Technology refresh/upgrades need to be included in long-term planning as part of the incentive to move toward managing systems instead of merely providing parts.
- There is a need to recognize that some items do not fit the PBL model in a cost-effective manner, and those instances need to be identified.

As part of the roundtable process, participants identified action items to enable these changes:

- JSF lessons learned on PBL contract model formulated and shared (Tom Burbage).
- The U.S. Army will do a reverse engineer to determine PBL impact to legacy aviation systems, such as

M-TADS/PNVIS on the AH-64 helicopter (Kevin Rees, John Lund).

- Northrop Grumman Integrated Systems will identify a program for the reverse engineer (David Nagy).
- Bell Helicopter-Textron will evaluate PBL implications on V-22 contracting.
- Boeing is to evaluate a reverse engineer for the C-17 legacy system (Tony Robertson).
- Need to reach out to small business to determine whether PBL fits at the piece-part level (to be assigned).
- Build the PBL concept into Defense Acquisition policy/education and parallel programs in industry (John Phillips).
- Establish a knowledge management system to track meaningful data on PBL contracts to enable decision-making, risk management and improve readiness capability (Tim Nichols). ♦

## UGS

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PLM is an increasingly important and visible enterprise business strategy through which organizations digitally manage a product's complete life cycle—all the way from its concept to its retirement—and gain higher business value from that product as a result.

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## AVIATION WEEK EXECUTIVE ROUNDTABLES

The Aviation Week Executive Roundtables are an invitation-only forum in which hands-on program executives meet to address issues common to technology development and industry effectiveness as it applies to space exploration, defense, security and commercial air transport.

The roundtables are an outgrowth of the Aviation Week Advisory Panels. The executives on these panels initially called for action planning surrounding several critical issues:

- Industry interoperability.
- Technology transfer/sharing.
- System life-cycle management.
- Development of future program leaders.
- Redefining engineering performance to fit new engineering task models.

From the work of these individuals, Aviation Week has held three Executive Roundtables. The first two were held to gain shared understanding of issues and held in conjunction with the Aerospace & Defense Programs Conference. The Toulouse World Aerospace Symposium site was used to develop action plans to address the critical issues.

The third roundtable was developed from these meetings, to define and move forward the definition of performance-based logistics in support of weapons systems readiness. ♦