

# Tools and systems for an important job

Precision Engagement & Mobility Systems is the home of aircraft, weapons and networks that serve critical functions

## PE&MS at a glance

**Official name of business center:** Precision Engagement & Mobility Systems

**President:** John Lockard

**Headquarters:** Crystal City, Va.

**Employees:** 25,000

**Major locations:** Puget Sound region of Washington state; Long Beach, Calif.; Mesa, Ariz.; St. Louis; Philadelphia

**Divisions:** Airborne Anti-Submarine Warfare & Intelligence, Surveillance & Reconnaissance; Global Mobility Systems; Global Strike Systems; and Rotorcraft Systems.

A.J. Walker ties down a blade on an Apache Longbow in Mesa, Ariz. The Apache Longbow is a program in the Rotorcraft Systems division of Precision Engagement & Mobility Systems.

**P**recision Engagement & Mobility Systems, one of three Integrated Defense Systems profit-and-loss centers, is responsible for military aircraft and weapons, as well as the systems that tie them together. PE&MS employees work on aircraft that serve functions from defending freedom to delivering needed supplies following natural disasters.

It's easy to see why PE&MS employees are passionate about the jobs they do and the programs they work on. They are dedicated to providing customers the capabilities they need when they need them.

*Boeing Frontiers* recently sat down with John Lockard, president of Precision Engagement & Mobility Systems, to discuss the business, its future and the role each team member plays.

**Q: What do you see as the main strength of PE&MS?**

**A:** The main strength of Precision Engagement & Mobility Systems is our people and the entire teams' focus on delivering innovative products and systems for warfighters. The PE&MS team is striving to set the standard for world-class program management, employing the industry's best practices and demonstrating peak performance to meet internal and external commitments.

**Q: What are your top priorities?**

**A:** We intend to focus on business excellence. A large part of the recent business realignment within IDS is really about improving execution and creating value through network-enabling technologies. We are finding there's a new level of capability that comes from putting

network interaction into our current products. For example, we have a major focus program underway right now with the U.S. Navy to incorporate network capability into the F/A-18. As you can see from the names of the four divisions (Global Mobility Systems; Airborne Anti-Submarine Warfare & Intelligence, Surveillance & Reconnaissance Systems; Rotorcraft Systems; and Global Strike Systems), our alignment is about producing capability and connecting products through networks to provide a whole new level of capability to our customer.

**Q: Where do you see the PE&MS business going in the international market?**

**A:** The international market is a real growth opportunity for PE&MS. Our F-15 Eagle sales continue with Korea and Singapore, and we are currently working with Korea on an F-15K follow-on buy. In Japan, the F-15 and F/A-18E/F Super Hornet are two great candidates for Japan's FX fighter competition. Our biggest international opportunity, though, is in India. India is expected to issue a request for proposal (RFP) soon for up to 126 aircraft for their Multi-Role Combat Aircraft Program. It potentially represents one of the largest acquisitions of combat aircraft by an international customer since the early 1990s. The P-8A aircraft also has enormous potential in India.

**Q: What are some of the most important decisions to be announced near-term?**

**A:** We have a busy year ahead of us. Just to name a few programs,



# Four-part harmony

Below and on Pages 34 and 35, *Boeing Frontiers* looks at each of the four divisions within Precision Engagement & Mobility Systems.

**PE&MS division profile: Airborne ASW & ISR**

Full name: Airborne Anti-Submarine Warfare & Intelligence, Surveillance & Reconnaissance Systems

Vice president and general manager: Tony Parasida

The Airborne ASW & ISR team is determined to leverage the knowledge and success—and increase the presence—of Boeing in this growing market. The most recent Quadrennial Defense Review—a Defense Department report that spells out the United States' defense program for the coming two decades—has a major focus on obtaining a better understanding of what's happening in the world every day. Airborne ASW & ISR's ability to provide this capability will be key to the division's growth.

**Key programs:**

- P-8A
- Airborne Warning and Control System (AWACS)
- Airborne Early Warning & Control (AEW&C)

**Notable opportunities and recent achievements:**

- The P-8A had an excellent year in development and remains on cost and on schedule. Any country that currently flies maritime patrol aircraft is a potential P-8A customer.
- Work continues with NATO on an AWACS upgrade.
- Both Australia's and Turkey's first AEW&C airplanes are now being modified.

After an excellent year in development, the P-8A program remains on cost and on schedule.

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we expect South Korea's Airborne Early Warning & Control decision. The U.S. Air Force selection of a new Combat Search and Rescue (CSAR-X) platform also is expected this fall. We have two CSAR-X offerings: One is the HH-47 based on the Chinook and the other is a partnership with Sikorsky on the HH-92.

The C-17 continues to gain strong support in the U.S. Congress. We also have let the international community know that if they are interested in the C-17, now would be the time to buy, as we hope to preserve that critical airlift capability for the future. In addition to Australia and the U.K., other allies have expressed interest in the C-17. Boeing joined L-3 Integrated Systems and Alenia to compete for the U.S. Army/Air Force Joint Cargo Aircraft program. We are looking forward to the U.S. Air Force Tanker competition and are interested in seeing that RFP. We're working closely with the Army to define a Block III Apache upgrade.

### Q: What's the future of unmanned systems?

**A:** There is a significant market for a variety of unmanned systems with a vast range of applications. We have the systems integration, communications and payload technologies to provide such platforms. Boeing has contracts with the U.S. Marine Corps, U.S. Navy and the U.K. Ministry of Defence's Joint UAV Experimentation Program for ScanEagle. This long-endurance vehicle is proving itself every day

in Iraq and in the Persian Gulf, and has more than 14,000 combat flight hours under its belt. *(Editor's note: ScanEagle is a 4-foot-long unmanned aerial vehicle (UAV) with imagery capabilities that allow tactical commanders to develop a clearer battlefield picture.)*

We were disappointed to see the X-45A Joint Unmanned Combat Air System demonstrator program come to an end, but we're fully prepared to engage in competition for any follow-on efforts with both the Navy and Air Force. We stand ready to meet next generation, unmanned long-range strike needs that may emerge in the future. We know how to build manned long-range bombers, and as the 64 missions we've flown with X-45A demonstrated, we're well on our way to realizing an unmanned capability as well.

The Rotorcraft Systems organization also is building the future of the rotary wing industry with the Canard Rotor/Wing, the A160 Hummingbird UAV and Joint Heavy Lift concepts.

### Q: How do you plan to help foster communication across PE&MS?

**A:** In my experience there is nothing more important than tagging up with your team every single day so that you understand the complexities and possible problems encountered throughout your organization. We have established in the new PE&MS organization an operating rhythm to foster and strengthen communication at every level of our business. This process includes daily phone calls

## PE&MS division profile: Global Mobility Systems

Vice president and general manager: Ron Marcotte

Global Mobility Systems programs provide airlift, tanker and integrated mobility solutions to customers around the world. The team currently is focused on C-17 domestic and international campaigns, as well as upcoming competitions for the U.S. Air Force Tanker and the Joint Cargo Aircraft. The Derivative Airplanes Program leverages the strength of Boeing Commercial Airplanes with the knowledge and talents of Boeing's mobility heritage to create top-notch products; the DAP team is pursuing additional sales of 737-based C-40 aircraft.

### Key programs:

- C-17 Globemaster III
- KC-767 Tanker Programs
- Derivative Airplane Programs
- Advanced Global Mobility Systems

### Notable opportunities and recent achievements:

- KC-767 work continues. Deliveries are scheduled to start this year to Japan and in mid-2007 to Italy.
- Global Mobility Systems stands ready to meet requirements the U.S. Air Force will spell out in its forthcoming tanker competition.
- C-17: Australia signed to buy four aircraft, with other customers expected. Also, the C-17 fleet recently reached 1 million flight hours.

**A Boeing-built U.S. Air Force C-17 Globemaster III from the 14th Airlift Squadron, Charleston Air Force Base, S.C., releases flares over the Atlantic Ocean near Charleston during a training mission.**



U.S. AIR FORCE PHOTO BY TECH. SGT. RUSSELL E. COOLEY IV



and weekly reports to get a status of the business and ensure that potential roadblocks are addressed on the spot. We also host monthly leadership-team meetings so that all executives understand our business, as well as quarterly “deep dives” and biannual reviews. We are establishing a culture of openness so that issues are worked top-to-bottom internally and externally.

**Q: What can employees do to contribute to the success of the business?**

**A:** Let me make this clear: Without employees there is no success. Each employee contributes valuable expertise that is crucial in performing to plan.

Throughout the organization, we have implemented Employee Involvement and High Performance Work Teams, in the spirit of the Lean+ initiative. These programs increase employees’ influence on work environment, productivity, elimination of redundancy and cost savings. These programs have proven beneficial to our business and will remain in place to enhance long-term growth.

I have asked every one of the managers in our organization to focus on better-than-plan. But it will take more than outstanding performance to meet this goal. I’ll need each employee to identify opportunities to improve processes, eliminate redundancy and then bring those ideas forward to their managers. Working collectively, we will accomplish our goals. ■

**F-15s have accumulated more than 6 million flight hours with the U.S. Air Force and four international customers: Korea, Saudi Arabia, Japan and Israel. In 2008, Singapore will be added to the list after it receives the first of 12 F-15SGs.**



**PE&MS division profile: Rotorcraft Systems**

Vice president and general manager: Mike Tkach

Rotorcraft Systems programs, including the CH-47 Chinook, AH-64 Apache and V-22 Osprey, provide proven vertical-lift solutions to customers throughout the world. There are more than 800 Chinooks and 1,000 Apaches in service worldwide. The V-22 is in the process of being fielded with the U.S. Marine Corps after receiving government approval to move forward with full-rate production.

**Key programs:**

- AH-64D Apache Longbow
- CH-47 Chinook
- V-22 Osprey

**Notable opportunities and recent achievements:**

- MV-22 Osprey is now operational; operational testing of the CV-22 begins later this year.
- Japan recently received its first two AH-64D Apache Longbows.
- The new CH-47F is currently in production for the U.S. Army. The CH-47F features a modernized airframe and a Rockwell Collins Common Avionics Architecture System advanced digital cockpit to meet the needs of current and future warfighters.

**PE&MS division profile: Global Strike Systems**

Vice president and general manager: Chris Chadwick

Global Strike Systems answers an emerging requirement in the Defense Department, and increasingly with international customers, for systems capable of projecting global power. Building on combat-proven weapon systems including the F/A-18, F-15, B-1B and JDAM, Global Strike Systems is focused on enhancing value by incorporating networked-enabled capabilities into existing platforms—and increasing affordability through initiatives such as Lean+, one of four Boeing companywide growth and productivity initiatives.

**Key programs:**

- F-15E Strike Eagle
- F/A-18E/F Super Hornet
- F-22 Raptor
- B-1 bomber
- B-2 bomber
- Harpoon Block III
- Joint Direct Attack Munition (JDAM)
- Small Diameter Bomb
- Standoff Land Attack Missile–Expanded Response (SLAM–ER)
- T-45 Training System

**Notable opportunities and recent achievements:**

- F-15 Eagle sales continue with Korea and Singapore; GSS is currently working with Korea on an F-15K follow-on buy.
- F-15 and F/A-18E/F Super Hornet are candidates for Japan’s FX fighter competition.
- India is expected to issue a request for proposal soon for up to 126 aircraft for its Multi-Role Combat Aircraft Program. The F/A-18E/F could be a candidate.
- The new Block II F/A-18E/F Super Hornet, equipped with the Active Electronically Scanned Array radar, is in production for the U.S. Navy.
- The EA-18G Growler, the electronic warfare version of the F/A-18, will conduct its first flight this year.