



# Target acquired

**The Harpoon missile program takes aim at Lean+ and scores again** by **Tim Deaton**

**F**or more than 35 years, Boeing's Harpoon missile has been one of the most successful anti-ship weapon programs in the world. It's deployed in 29 countries.

More recently, and closer to home, the program zeroed in on cost, performance and schedule—and it is hitting those Lean+ targets, too.

"To maintain our competitive edge, in the spring of 2009 we challenged each facet of the program to improve processes, reduce costs and reinforce our performance," said program manager Jim Young. The Harpoon Supplier Management team has been working with key suppliers to reduce lead times—the interval between when a purchase order is placed and delivery of parts begins. The team targeted 13 major suppliers whose lead times exceeded 12 months. Using its Lean+ expertise, the team worked with each supplier to identify areas where processes could be improved to reduce production times.

"We walked their production floors, reviewed processes and discussed issues," said David Ryan, Lean expert with the Harpoon Supplier Management team. He led several of the supplier studies.

The effort has paid off.

- Kemco Aerospace Manufacturing, which provides a number of machined parts, has cut its lead time nearly in half, from 18 months to 10.
- ATK Tactical, which provides the Harpoon rocket motor, has reduced its lead time from 19 months to 14, a 27 percent improvement.
- General Dynamics Ordnance and Tactical Systems, which supplies the warhead case, has slashed its lead time by 43 percent, from 16 months to 11.
- MB Aerospace, which builds the missile canister, has cut lead time from 19.5 months to 13.5, a 30 percent savings.

The 13 suppliers have reduced lead times by a combined 20 percent—from 204 months to 164 months. That means big savings for Boeing and suppliers and, most important, competitive prices for the customer and the potential for additional missile sales.

"When we place orders for these long lead time items, we have to commit company funds for an extended time period," said



Jeff Kutterer, a manager with Harpoon Supplier Management. "Our goal was to reduce the suppliers' lead times to 12 months so that our purchase orders could be issued closer to the actual need date and free up cash."

Beginning with 2010, purchase orders for long-lead items will be placed an average of three months later than in the past, freeing up \$6 million in company funds, or \$2 million for each month's delay in ordering.

"In terms of cash flow and saving money, this is a big deal," Ryan said. "But we're not stopping here." The goal for 2010 is to reduce lead times to nine months. ■

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**PHOTOS:** A Harpoon Block II anti-ship missile is launched by the U.S. Navy during training. **U.S. NAVY (Inset)** Amy Rauls, procurement agent (left), and Jeanine Dickherber, supplier manager (right), examine a Harpoon guide shell while working with Richard Zimmerman, chief executive of Kemco Aerospace Manufacturing, to lean out processes and reduce costs. **RON BOOKOUT/BOEING**