

## **BOEING SLAM-ER Team Uses Pathways® Process to Address Supply Chain Goals**

Boeing Integrated Defense Systems (IDS), based in St. Louis, is a \$23-billion business with capabilities in defense, intelligence, communications, and space. Boeing IDS is a recognized leader in providing end-to-end services for large-scale systems for global military, government, and commercial customers. The Weapons Programs unit is a world leader in all-weather precision munitions, providing a wide spectrum of strike weapon capabilities. These include the Standoff Land Attack Missile-Expanded Response (SLAM-ER). The SLAM-ER is the Navy's premier air launched weapon for precision strikes and is often the weapon of choice in current Middle-East conflicts.

### **Project**

The Boeing/Navy SLAM-ER team has set a goal to produce the SLAM-ER Missile in 52 weeks to support the Navy's funding cycle. For the SLAM-ER Program, supplied parts make up over 80% of the cost of the product and Value Stream Maps indicated that two-thirds of the product lead-times were driven by supplier lead-times. A focus on key suppliers was essential for achieving the lead-time target. With sponsorship of Navy MANTECH, the Boeing SLAM-ER Team set out to do just that. Work was performed under a subcontract from Dynamics Research Corporation.

Boeing's Lean Engagement toolkit and TechSolve's *Pathways®* enterprise improvement process joined forces again as an integrated Lean-*Pathways®* approach to help suppliers improve their performance and enhance their competitiveness. This integrated process was deployed with four suppliers selected based on their strategic importance to the US Navy/Boeing SLAM-ER missile value stream. During a 15-month Lean-*Pathways®* program running from May 2001 to August 2002, these suppliers defined the business context for their lean journey and completed a series of assessments, training, data collection, and process mapping exercises designed to teach suppliers how to identify improvement opportunities at their facilities and prioritize these opportunities with respect to their strategic business objectives. A time-phased Roadmap for Change with associated metrics was developed, and the process of change was initiated using Accelerated Improvement Workshops (Kaizen Events). These workshops involved multi-discipline and sometimes multi-company teams working together to brainstorm and implement solutions in targeted improvement areas and create reductions in cycle time, product travel, work in process (WIP) and other key metrics across production and support areas.

### **Result**

The success of the project was evident in the results with engaged suppliers such as reduced cost and lead time and improved quality and delivery performance. The suppliers have also developed an implementation plan for their organization that they are capable of carrying out on their own. Engaging several key suppliers simultaneously demonstrated a collective impact on Boeing's goals for the SLAM-ER program:

- 18% Improvement in Supplier Delivery Performance
- 22% Reduction in Lead-Time
- 98% Acceptance Rate for Supplier Quality Performance
- 100% Increase in Inventory Turns at Boeing

The long-term targeted result is a lean, flexible supply chain for Boeing missile programs and a set of tools that can be applied to the entire Boeing supply-base. Following this initial program, a second SLAM-ER supplier group was engaged. During 2004, Boeing applied lessons from its SLAM-ER experience to begin a new internal initiative that engages suppliers across multiple weapons programs.

During 2002, the SLAM-ER Lean-*Pathways®* Team received the following recognition:

**The 2002 Missouri Team Quality Award and the National Center for Advanced Technologies' Defense Manufacturing Excellence Award.**