



# 2 0 0 2 MISSOURI TEAM QUALITY AWARD RECIPIENT

## SLAM-ER LEAN PATHWAYS TEAM at Boeing Weapons Programs in St. Charles

### PROFILE



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.

### OPPORTUNITY FOR IMPROVEMENT

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 also indicate that two-thirds of the product lead-times are driven by supplier lead-times. As Boeing continues on its journey towards eliminating non-value-added activities and becoming Lean, facts such as these are making it more apparent that we can't complete this journey without bringing our suppliers along. The SLAM-ER Lean *Pathways* Team set out to do just that.

### TEAM ACTIONS

The SLAM-ER Lean-Pathways Team developed and implemented a structured process to help suppliers improve their performance and competitiveness by applying lean enterprise

practices and strategies. 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 program running from May 2001 to August 2002, these suppliers completed a series of diagnostic tools, training, data collection and process mapping exercises designed to teach them how to identify improvement opportunities at their facilities and prioritize those opportunities with respect to their strategic business objectives. The highest priority opportunities were addressed with Accelerated Improvement Workshops (Kaizen Events). These events are focused improvement activities, which involve multi-discipline teams working together to brainstorm and implement solutions. They resulted in reductions in cycle time, product travel, and work in process (WIP) in production and support areas.

### RESULTS

The success of the project is 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
- 2% Improvement in Supplier Quality Performance
- 22% Reduction in Lead-Time
- 100% Increase in Inventory Turns

The long-term targeted result is a lean, flexible supply chain for the Boeing missile programs, and a set of tools that can be applied to the entire Boeing supply base.

### FUTURE PLANS

The SLAM-ER Lean *Pathways* Team has identified four additional suppliers for a second phase of the Lean *Pathways* Program. Phase II leverages opportunities discovered during the current program to prove a further streamlined engagement plan and enable the transfer of the *Pathways* tools to the Boeing Supplier Development Tool Set. The team is continuing work to create a benchmark program for an integrated supply chain with shared metrics that support the Boeing and Navy program goals for lead-time, cost, quality and delivery.

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