



*Lockheed Martin Missiles and Fire Control
Orlando, Florida
Fire Control Line of Business*

Achievements

Our mission at Lockheed Martin Missiles and Fire Control (MFC) is to protect our Warfighters and ensure their safety by providing superior weapon systems and sensors. Our focus on process improvement, product innovation, and people development enable MFC in Orlando to provide Warfighters with reliable weapons that perform as required—the first time and *every* time.

Our facility has integrated the principles of LM21 Operating Excellence Lean Six Sigma (LSS) throughout the business. Our culture empowers employees to engage in continuous improvement as a daily activity to increase value, to save time, to reduce cost, and to improve results.

Delivery

- 99% on-time delivery to customer in 2007 of world class performance, highly complex systems

Quality

- ISO 9001:1994, ISO 9001:2000, AS9100B, and ISO 9002:2002 certified
- Total Quality Yield of 96.81% in 2007
- Reduced rework costs by 68% in two years (as a percent of total labor and material dollars)

Cost

- We have increased our Lean savings 40% over the past two years (MFC-wide)
- 26% return on invested capital in 2007 (MFC-wide)
- 30% increase in Fire Control Line of Business (LoB) revenue over the past three years

Customer Satisfaction

- Contractor Performance Assessment Report (CPAR) resulted in 100% satisfaction of our customers
- 100% customer retention rate
- 30% increase in orders for Fire Control LoB in the past two years

Shingo Candidate

Our focus for the 2008 Shingo Prize is our Fire Control LoB. By applying Lean principles to develop our Fire Control Factory (FCF) and Fire Control LoB value streams (product lines), we provide our Warfighters with reliable weapons.

Environment

MFC in Orlando is committed to operating in a manner that actively manages risk, prevents accidents and ESH incidents, conserves natural resources, protects the environment and ensures the safety of employees, contractors, and the public.

Due to our efforts, we have reduced employee lost time by 66.7% since 2001.

Going Green

- Reduced hazardous waste generation by 60.9% since 2000
- Recycled 59.5% of all our waste in 2007
- In 2007, we recycled over 27,000 tons of construction material during a lean initiative in which we relocated our Material Handling Center.
- Ongoing initiatives:
 - Reducing carbon impact through increased energy efficiency and use of renewable fuels.
 - Reducing waste to landfills through recycling, alternative materials and disposal methods.
 - Reducing industrial wastewater discharge through water use reduction and recycling facilities.
 - Eliminating substances of concern by developing a corporate restricted chemicals list and implementing processes to remove them from use.

Safety

- Target Zero helps develop a “zero accident” mentality and rewards employees for proactively identifying safety concerns
- The Move Safe initiative is our proactive process for identifying and mistake-proofing potential unsafe activities
- The Lockheed Martin Standard Injury and Illness system tracks work-related injuries and close calls to prevent future accidents of a similar nature
- OSHA-recordable injury and illness cases with days away from work is 0.81 for 2007
- ISO 14001 certified

People

Developing employee talent is paramount to the future success of our site. We have created an environment of continuous learning that enables employees to improve their knowledge, skills, and abilities. Employees build upon existing skills through mentoring, on-site, corporate, and external training. Our learning environment includes Lean and Six Sigma training in which over 20 of our Suppliers and Customers have participated.

A key aspect of policy deployment in Orlando is the alignment of our goals and metrics through our Performance Management Teams (PMTs). *Every* member of our production team (floor, supervision and management) participates in a

PMT. These PMTs establish continuous improvement goals, identify, test, and implement process improvements, and monitor results. The teams are empowered to handle all aspects of production, including scheduling, communication, training, quality assurance, safety review, and environmental compliance. Integrating LSS tools into our culture has significantly enabled the PMTs with the effective tools to discern and improve value and flow. Our PMT leads are either certified Green Belts or Black Belts. The PMT/LSS processes create a culture of continuous improvement that is embodied in our daily jobs. This process is also part of leadership development in Orlando – most of our production managers and directors were PMT leaders responsible and accountable for continuous improvement.

Building strategic alliances with our suppliers is an essential component of our business. We are transitioning from traditional source inspection of supplied hardware to in-process surveillance. This proactive relationship with our suppliers prevents receipt of defective hardware. In addition to these quality initiatives, two different management teams work with our suppliers on potential hardware issues. The Supplier Management Team (SMT) is led by a senior engineering manager and works to proactively solve problems and prepare suppliers for system changes. The Supplier Performance Management Team (SPMT) functions in a manner similar to our in-house Performance Management Teams (PMTs). The SPMTs encourage and create a continuous improvement environment at our suppliers.

Our external customers are represented on-site and are involved in repair decisions, design changes, program reviews, and even corrective action. We also have employees deployed in the field to assist our customers with repairs and service, and we regularly bring in soldiers to address the strengths and weaknesses of our products and to interact with our employees. In addition to this on-site interaction, we also conduct surveys to assess satisfaction in the field. External customer satisfaction is measured through the Contractor Performance Assessment Report (CPAR) system.

Our Full Spectrum Leadership program encourages the development of leaders who deliver business results and exhibit strong leadership behaviors. Full Spectrum Leadership helps us identify and nurture the most important characteristics we want in our leaders, develop those qualities in our future leaders, and provide the right measure of accountability.

At MFC in Orlando, we are more than a collection of offices and facilities or a roster of names in a company phone directory—we are neighbors, students, mentors, coaches, and parents. In addition to building the advanced technology products and services of the 21st century, we strive to strengthen our communities and work to build a better America every day of the year.

Process

At MFC in Orlando, we design, manufacture, and support Fire Control and navigation systems. Fire Control is a process of identifying targets day or night and laser designating those

targets for precision guided weapons. Manufacturing processes include precision machining, fabrication of multispectral optics, composite fabrication, and assembly, electro-optical alignment, and test of Fire Control systems. These precision processes enable our systems to have greater stand-off ranges and in turn provide increased survivability for the Warfighter.

Products

At MFC in Orlando, we design, develop and build advanced combat systems for customers that include the US Army, Navy, Air Force and Marine Corps, as well as foreign nations. We are considered an industry leader in technologies related to electro-optics, millimeter wave radar, image and signal processing, advanced materials, electronic packaging and large system integration.

- GMS2 is the navigation and targeting system in production for the USAF Special Operations Command AC-130U Gunship.
- JSF EOTS is a multi-functional system for precision air-to-air and air-to-surface targeting for the F-35.
- The Sniper pod is a targeting system that provides positive identification, automatic tracking, and laser designation for fighter aircraft.
- Arrowhead provides Apache helicopter pilots advanced navigation and targeting capabilities during day, night, and adverse-weather missions.
- Longbow FCR searches, detects, locates, classifies, and prioritizes multiple moving and stationary targets on land, air, and water in all weather and battlefield conditions for Apache helicopters.

Plant

Our facility opened in 1957. We have 287,000 square feet of manufacturing space and employ 4,265 personnel. The Fire Control LoB has 233,000 square feet of manufacturing space and employs 1,251 personnel. A strong employee commitment to protect and ensure the safety of our Warfighters yields products that exceed expectations and gives our customers an unprecedented ability to fight, win, and survive.

Lockheed Martin Corporation

Headquartered in Bethesda, Md., Lockheed Martin Corporation employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. The Corporation reported sales of \$41.9 billion in 2007.

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