



# Lean Case Study: Transforming Ogden ALC



.....user case study



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# Transforming Ogden ALC



Hill Air Force Base, Utah, provides logistics management, support and maintenance for a number of the US military's airframes, missiles and munitions. The largest organization and host at Hill AFB is the Ogden Air Logistics Center, which is comprised of 21,000 employees, over 19 buildings, and five major wings.

In June 2003, the 309th Maintenance Wing at Ogden initiated a transformation project designed to explore alternative methods for procuring, controlling, and managing tools and consumables. The objective of this project was two-fold. First, to dramatically improve tool and consumable support for Air Force Materiel Command maintenance, repair, and overhaul installations. This was to be accomplished through point-of-use activities and innovations by taking advantage of accurate, real-time inventory information. A comprehensive material management approach facilitated an uninterrupted flow of materials, reduced excess consumption, automated procurement and reorder, decreased procurement and restocking costs, eliminated inventory carrying costs, and increased inventory turns. Then, the second objective was to reduce total ownership costs associated with managing the tool and consumable supply chain while increasing worker productivity.

Ogden's inefficient procurement and replenishment process for tool and consumable commodities was unresponsive to the needs of the work force. Initially, the project targeted three areas within the 309th Maintenance Wing: A-10 aircraft production, aircraft structural repair sections (A-10 wings, F-16 wings and stabs, and C-130 flight controls), and electronic and instrument sections. At the time, mechanics were traveling excessive distances to retrieve tools, standing in line at the tool crib, and frequently experiencing difficulty obtaining the right tools or consumables to perform their job. It became quite apparent the inefficiencies were significantly hampering Ogden's production output and overall support to the warfighter.



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Today and for years to come, Ogden is realizing the cost savings and increased productivity resulting from the lean transformation of the tool and consumable supply chain management. The catalyst of this transformation was the Maintenance Directorate's Tool & Consumable Support contract awarded to the Fastenal Company in July 2004. To date under the contract, Ogden has purchased and installed CribMaster Inventory Management Software and over 150 CribMaster point-of-use devices. The approval to operate the inventory management system was certified and accredited to reside on the base local area network. By implementing an end-to-end supply chain with CribMaster point-of-use devices, such as MRO cabinets and lockers, the tools and consumables are more readily accessible to every mechanics working on more than one portion of a project simultaneously. This capability has significantly contributed to providing the warfighter a level of support never before seen, especially in the areas of returning aircraft and spare parts back to the customer faster. In fact, these point-of-use devices reduced travel time by 330% and reduced non-productive time valued at \$83,000 each month, among many other realized cost savings that were uncovered by a post implementation cost savings study.

Also, thanks to Fastenal's execution of industrial distribution best practices along with CribMaster's automated purchasing capabilities and designated min/max levels for each item - stock-outs were eliminated by 100%. Prior to implementation, Ogden held approximately \$2 million in safety stock. Nearly all of that has been eliminated as a result of Fastenal pre-positioning inventory at the point-of-use under consignment. Now production will not stop because a mechanic does not have the right tool or consumable item. This is without question a ground-



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breaking best practice applicable throughout the Air Force and the Department of Defense.

Major Brad Archer (Logistics Career Broadener), reflected upon the initiative, “The first step was to figure out what tools the mechanics were actually using, who was using them, and how many of those tools they required on hand.” In order to better understand the aircraft maintenance and inventory workflow, Ogden relied upon Fastenal. As a team, Fastenal and Ogden analyzed the work flow by performing walk-time studies and analyzing resource cost centers. Central to the consumable management lean transformation is the CribMaster system that was successfully implemented requiring very few adjustments after go-live.



A complete elimination of inventory carrying costs was immediately achieved by Ogden because the contract created an opportunity for Fastenal to utilize the point of use technology as an enabler and offer inventory on a consignment basis. Fastenal and Ogden’s strategic partnership paved the way for sales volume discounts to lower commodity prices and linked demand and replenishment planning. According to Major Archer, “because CribMaster has smart replenishing capabilities, a portion of Ogden’s supply technicians now have the freedom to focus on their core mission:” sourcing Air Force and Defense Logistics Agency parts, managing Bills of Material, and working awaiting part listings, etc. With the commodities taken care of, the supply technicians now have more time to perform their core duties.

As an added bonus, CribMaster turned out not only to be inventory management software for Ogden, but also a viable cost-accounting tool. Prior to the supply chain lean transformation, Ogden could not accurately track how much they were spending on their tool and consumable commodities so they had no reliable means to budget and forecast what will be needed to handle new work loads (F-22, F-35, night vision goggles, etc.) in the future.

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The sporadic, fragmented and unpredictable processes of manual ordering made accurate cost accounting nearly impossible. With CribMaster, decision makers know exactly which employee is using what and can even prepare for upcoming jobs by simply filling out a work order. Then, Fastenal will deploy to the point-of-use the tools and consumables the mechanics will need for that job. In addition, Ogden now has the capability to review their consumption history and deliberately plan for future commodity needs.

Major Archer stated, “They needed to embrace a change in strategy, structure, and system for managing the tool and consumable supply chain. CribMaster was a key component to making it all work.” Fastenal’s tool and consumable support solution along with Cribmaster inventory management software has allowed Ogden to return jets in 119 days as opposed to 142, on average. According to Major General Kevin Sullivan, “The bottom line here is that there are 11 airplanes, as a result of this change to that process, that are now sitting out in the field somewhere instead of sitting at Ogden<sup>1</sup>.”

### Summary of Results at Ogden ALC

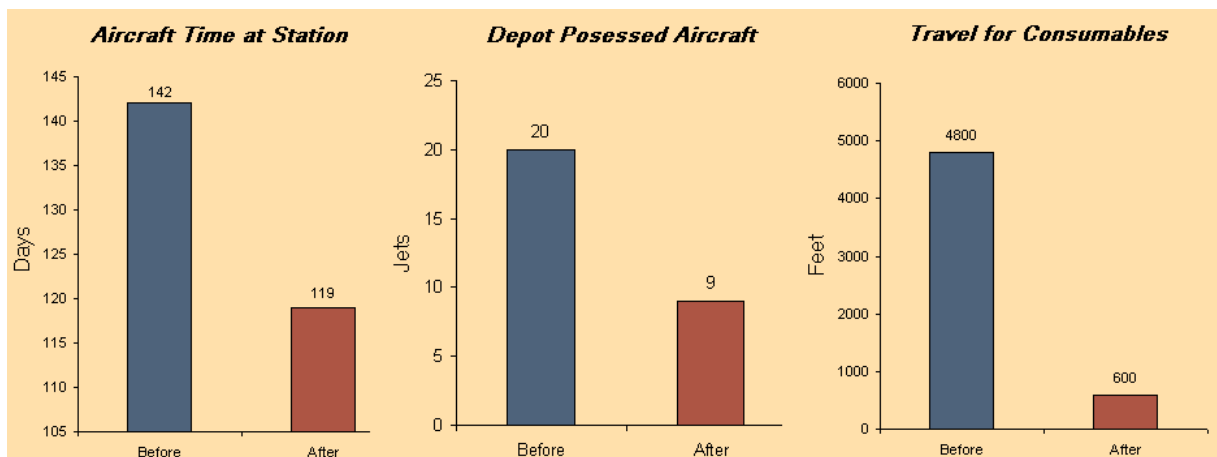
1. More time available to turn out Warfighter assets
2. Vending machines pay for themselves in under 6 months
3. Stock outs were eliminated by 100%
4. Travel time was reduced by 330%
5. Non-productive time was reduced by \$83,000 each month
6. 11 More jets in the field



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<sup>1</sup>Major General Kevin J. Sullivan, Commander, Ogden Air Logistics Center. Logistics Officer's Association 2005.