

**The Secretary of Defense Performance-Based Logistics Awards Program  
For  
Excellence in Performance-Based Logistics  
In  
Life Cycle Product Support**

**Section 2  
Summary of Criteria Accomplishments**

**Improvements in Warfighter-Based Capabilities and Outcomes**

In April 2006 the Defense Logistics Agency (DLA) Defense Supply Center – Philadelphia awarded a performance-based Industrial Prime Vendor (IPV) contract to Lockheed Martin (LM) that consolidated end-to-end supply chain management responsibility for over 96,000 unique consumable NSNs supporting all Air Force depot maintenance activities. Specifying metric outcomes significantly higher than those achieved through traditional non-PBL processes, the PBL contract has been an unqualified success. Prior to the PBL contract, DLA was experiencing growing inventory carrying costs utilizing a labor-intensive process involving frequent contracting

actions for each part type across numerous OEMs, small businesses, and distributors. Variations in customer demand under the non-PBL process complicated manufacturer’s delivery times, resulting in frequent stock-outs, delays in filling customer requirements, and



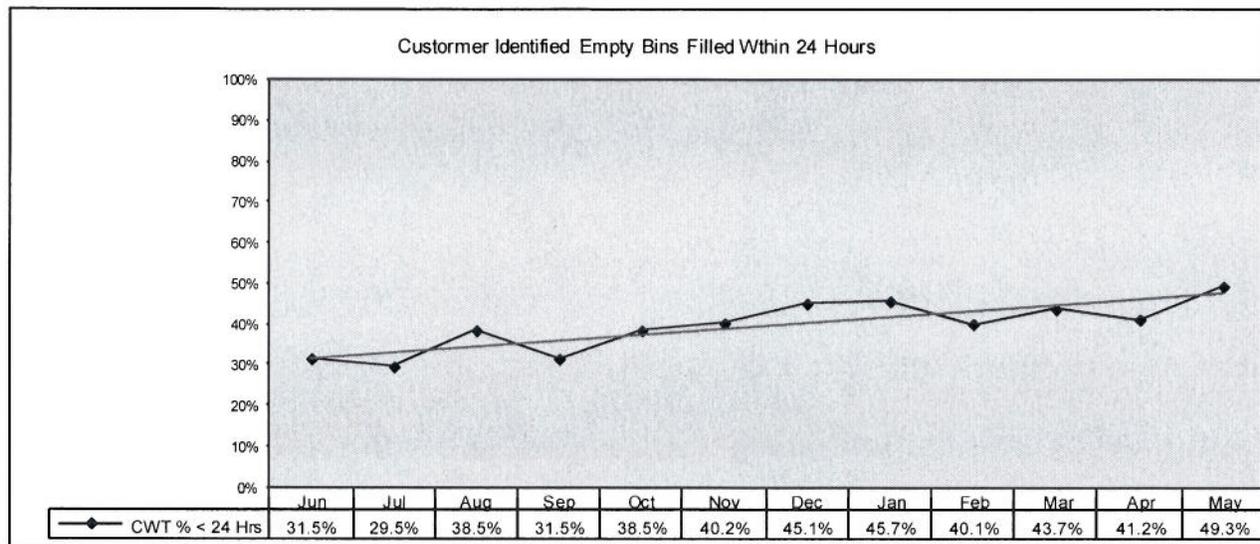
consequent negative impact on the Warfighter. Under the PBL contract, bin fill rates have averaged over 99% (as compared to a low of 62% under non-PBL support), and when a stock outage does occur, parts are delivered promptly to USAF technicians, In addition, the contract has enabled the

maintenance of 9 out of 11 engine war reserve engine levels at 100% above established requirements for 2012. All of these positive actions are major contributors to performance improvements of significant benefit to the Warfighter.

**Mission Success:** Under this PBL contract, LM assumed responsibility for the total end-to-end supply chain, including demand forecasting, inventory management, warehousing of material, order fulfillment, transportation, and parts delivery to include direct work center material replenishment, replacing the former framework in which parts were stored in Depots and moved forward to work centers only upon requests from the military supply functions.

Through innovative best commercial material management practices, the IPV team has automated many manual processes, moved material forward directly to the work centers and introduced production kitting concepts, reducing DLA inventory carrying cost. Through innovative establishment of distribution centers, leveraging of commercial delivery options, and best-in-class inventory forecasting and management practices, the IPV team has consistently provided outstanding and cost-effective parts availability over the last six years. During this period of performance over 47,000 replenishment actions have been completed, stock outages have been reduced to achieve a bin fill rate of 99.71%, and when a stock outage does occur, 49% of the time parts are delivered within 24 hours directly to USAF technicians, doubling the percentage of items delivered within 24 hours vs. past performance.

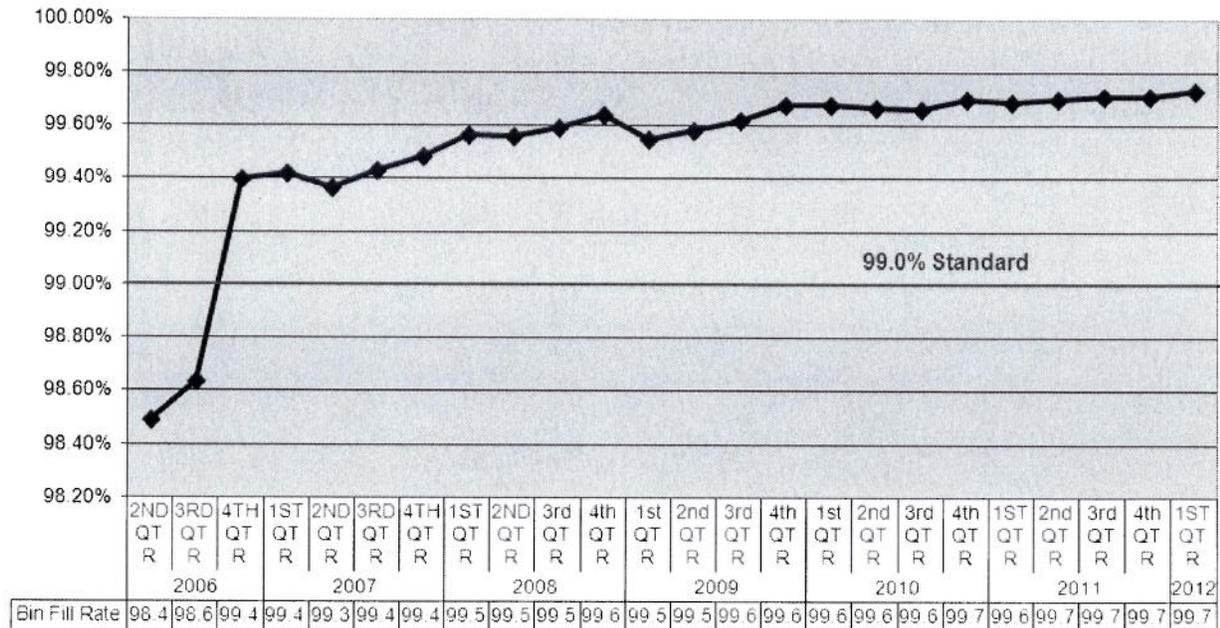
## USAF IPV CUSTOMER WAIT TIME TREND



### CWT: Customer Wait Time

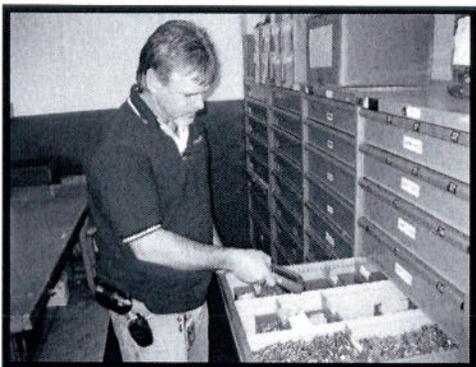
**Material Availability:** The objective of the IPV PBL contract is to significantly improve combat readiness through improved availability and delivery of consumable hardware at a cost equal to or lower than traditional support. The PBL contract requires a 99% bin fill rate, with empty bins being filled within 24-hours of the contractor receiving notification or during self-identification of an empty bin. The government and industry team have collaborated on a joint sourcing strategy that overcomes previous internal and external process shortcomings which included delayed procurement actions, and manufacturing capacity and raw material constraints precipitating delayed shipments, all resulting in high levels of unfilled customer requisitions. These innovative solutions have enabled a sustained bin fill rate consistently exceeding the 99% contract metric. The percentage of customer identified empty bins filled within 24 hours has consistently increased, achieving 49% to-date in 2012 and continuing to rise.

## USAF HISTORIC IPV BIN FILL RATE



Another important element of this PBL is the World-Wide-Demand contract clause, which currently includes 748 NSNs identified as critical to global replenishment requirements, which proved to be an extremely labor intensive and time consuming process under non-PBL processes. Under the IPV team “one part, one price, one source” concept this contract component has been accomplished efficiently and effectively at less cost to DLA.

**Material Reliability:** Support for MILSPEC consumable hardware has become increasingly complex



due to the very high optempo aircraft sortie requirements in the global war against terrorism. LM maintains a dedicated team of ISO AS9200 Rev C certified quality assurance engineers and technicians as the foundation for the Quality Assurance program under the IPV contract, ensuring that all aspects of reliability, integrity, and availability from verifiable

manufacturers are a persistent focus of the PBL program. The IPV team quality assurance and procurement specialization process consistently monitors and analyzes hardware design and materials

composition while considering cost and lead-time requirements. For example, during the last contract year 163 NSNs were identified by the Government-Industry Data Exchange Program (GIDEP) as potential risks in these areas. The IPV Quality Assurance team conducted thorough research through the contractor's legacy system and determined that zero con-conforming parts had been delivered to the USAF customer.

### **Sustainment Strategy Effectiveness/Efficiency**

**Ownership Cost Management:** Cost savings to the USAF under this contract total over \$15M annually, comprised of reductions in infrastructure, kitting costs, and supply inventory drawdown. The PBL approach with a single point of responsibility for end-to-end supply chain management provides significant economies of scale and the ability to eliminate redundant functions, facilities, and personnel cost. Through a proactive management structure the IPV team has achieved significant life cycle cost benefits through a just-in-time concept of operations which assures that a right sized inventory is sustained to meet USAF depot maintenance activities while minimizing stock-outages and subsequent work stoppage actions. Monthly pricing reviews are conducted to identify major cost drivers, which are aggressively analyzed and optimized. Through a comprehensive automation effort by LM, over 21,000 replenishment actions have driven direct cost savings of \$5.3M in USAF owned material utilized to replenish technician's requirements. The PBL program has enabled exceptional improvements in support for less cost than would have been paid under traditional support.

**Public-Private Partnering:** The IPV PBL solution exemplifies the collaborative efforts of the organic base and industry in crafting a support solution that leverages the infrastructure and expertise of the DLA Aviation and Troop Support capabilities with the commercial supply chain management and logistics competencies of the industry sector in what has proved to be a model PBL program. In that regard, it serves as a prime example of DoD's stated goal to "expand partnering beyond depot

maintenance.” The PBL strategy carefully leverages the DLA Depot resources to complement industry capabilities as recognized leaders in Third Party Logistics, fully aligning the efforts of the logistics provider and the manufacturer with aircraft weapons systems and equipment support demands. Continuing interaction in a public-private team approach has engendered an enduring partnership whose impressive success in performance and cost is self-evident. The team established a contractual framework that leverages best commercial practices and maintains the industrial base for military hardware. By utilizing a single logistics integrator, the DLA has a single point of accountability for all supply operations supporting USAF Depot Maintenance and Repair support which provides enabling access to state-of-the art commercial systems in the areas of forecasting, transportation, warehousing, and technical information flow, ensuring that real time requisition status, shipping status and product support information is provided to the customer via web-based technology readily available 24 hours a day, 365 days a year.

**Systems Engineering Approach:** Unlike commercial commodities, military aircraft and equipment undergo significantly more impact, wear and stress due to high optempo in austere operating environments, which requires increased engineering parts assessment. The IPV team implemented and executes a monthly critical safety of flight review for all material on the contractual schedule of items. When a part is identified under this category, the team immediately researches manufacturer pedigree and determines suitability to continue usage of a particular item. This collaborative effort between the manufacturer, the LM IPV integrator and the DLA Support Team facilitates and ensures prompt exchange of information, ensuring immediate action is taken to address any hardware safety issues including the immediate quarantine of any and all suspect parts. The result is a reduction in non-mission capable aircraft due to a lack of consumable hardware, assuring optimal weapons system availability.

**Footprint Reduction:** Beyond improved material availability, the highest contributor to significant cost savings realized by the government customer is accomplished through total management of the reserve/stock overages at USAF locations. Majority movements of stock have occurred within one business day of request, eliminating any potential stock-outage. Two-thirds of this material is stored at LM-managed distribution centers, reducing USG warehouse space, which allowed 5,000 square feet of storage space to be returned to USAF for use in their production efforts. This out-of-scope initiative was implemented at no cost to the USG.

**Obsolescence Management:** One of the most critical aspects of any supply-oriented contract is persistent attention to, and actions taken to mitigate, the impact of obsolescence. Consistent with that priority, the IPV team has mitigated supply chain risk and responsibility for obsolescence management as part of their forward supportability analysis model. This model provides quarterly reports of potential risks to the supply chain due to various factors including parts obsolescence. The industry team has collaborated to determine true parts obsolescence issues and worked together to provide an uninterrupted supply chain for either the original part or recommending to the engineering source authority potential suitable replacement parts. Additionally, obsolescence risk to the provider is minimized by regular communication between government and industry team members and regular program reviews.

**Innovative Contracting Support Approach:** The competitive, firm-fixed price PBL contract was awarded to Lockheed Martin for a three-year base period, two two-year and one three-year options at a total estimated value of \$750M. This is a complex, multi-faceted contract fully consistent with the PBL strategy tenet of “buying performance outcomes”. The strategy employs the use of a single commercial supply chain Product Support Integrator (PSI) to provide responsive and timely support to USAF depot maintenance activities, while reducing the total logistics ownership costs associated with maintaining a

vast array of consumable hardware items. The IPV team has employed a comprehensive end-to-end supply chain service by assembling a team of thirteen commercial distributors and manufacturers to support this high volume, fast moving logistics function. The USAF IPV PBL represents one of the earliest and best innovative approaches in extending the PBL model to commodity outcomes. A prime example of this innovation is the proactive action taken by working with Clemson University to develop the IPV Bin Analysis Report (IBAR) Supportability Enhancement Tool, a unique forecasting methodology that has enabled 'over the horizon' forecasting of potential or real stock outages. Among its enhanced capabilities is providing item supportability outlook down to the bin level, buy recommendations considering the variability of demand and lead time, and risk assessment based on aging orders, empty bin history, bin usage, and supportability assessment. IBAR has served as a vital link in forecasting consumable hardware requirements as part of the overall Industry Team's forecasting model currently implemented at the three USAF air logistics centers. Implementing IBAR required a bold and collaborative approach; there were no precedent contracts or business arrangements to serve as a template. It was achieved through the dedication and collaboration of the USG and Industry Team in the face of various obstacles ranging from contract scope, ownership of assets and innovative pricing structures.

In summary, The IPV contract is viewed as the exemplar model for commodity PBL contracting, and based on its long term success it remains the paradigm for PBL implementation at the component level.

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Section 4  
Achievements**

The Industrial Product-Support Vendor Team achieved three notable events this year: 1) Drove annual material cost reductions for U.S. Government by \$3.8 million. 2) Sustained stellar customer confidence in our supply chain management abilities which resulted in award of 2nd option period. Garnered a solid 4.3 contractor performance assessment report. Implemented the world wide demand clause; 748 parts supported directly to Defense Logistics Agency warehouse fulfillment, \$4.2 million contract value added, and supported service support for Warner Robins, with 26 logistics support employees. 3) Solid metric performance: primary metric empty bin fill time increased by 7.3%; achieved historic high complete kit delivery of 99.35%; and high bin fill rate of 99.77%, equating to merely 665 empty bins out of a total population of 296,000.

IPV: Small Part...Big Impact!