

**The Secretary of Defense Performance-Based Logistics Awards Program
for
Excellence in Performance-Based Logistics
Section 2
Summary of Criteria Accomplishments**

Mission Success: The Naval Air Systems Command (NAVAIR), the Naval Inventory Control Point (NAVICP), and The Boeing Company are the primary organizations responsible for supporting carrier operations and more specifically, the Super Hornet. The following operational statistics are a dramatic example of the effectiveness of F/A-18 Integrated Readiness Support Teaming (FIRST) on the Super Hornet. During combat missions in Iraq, the Super Hornets in CVW-9 and CVW-11 expended 350,000 pounds of ordnance with a success rate of over 98%, averaged over 55 flight-hours per day with a sortie completion rate of 97.5%, passed over 2.3 million pounds of fuel generating more than 430 extra combat sorties, and delivered their first ever quantity-four Joint Direct Attack Munition release. Notably, these accomplishments were achieved in light of the earlier than planned Super Hornet introduction into combat operations.

Materiel Availability: FIRST provides the Navy with unparalleled levels of support for the Super Hornet. The Commander Naval Air Forces utilizes Ready for Tasking (RFT) as the key measure of aircraft materiel availability. RFT ensures that the warfighter receives the aircraft capability required to meet mission requirements. As detailed in Illustration 1, RFT for operational and training squadrons has been excellent, and the RFT rate for deployed squadrons has been near perfect. Additional materiel availability performance outcomes are provided in Illustrations 2 and 3. FIRST has enabled Super Hornet mission capable rates to rise from 57% in 2000 to 73% in May 2007. Further evidence of FIRST's positive impact

on materiel availability is demonstrated by an A_o (Operational Availability) rate for FIRST components of 84.3% as compared to an A_o rate for non-FIRST components of 71%.

Ownership Cost Management: FIRST has exceeded Fleet readiness expectations and requirements while reducing total ownership cost through efficient and proactive supply chain management, reliability and supportability improvements, integrated information systems development and deployment, and the implementation of groundbreaking outcome based metrics. Because FIRST is a firm fixed price contract, Boeing is incentivized to stabilize the cost of all integrated logistics elements including spares and repairs through long-term agreements with suppliers, reliability investments, management efficiencies, proactive obsolescence management, etc. A few specific opportunities that FIRST provides regarding the reduction in total ownership cost are as follows:

- a. Spares purchased concurrently with production: By employing Spares Acquisition Integrated with Production processes, FIRST has provided a \$48.3M in savings.
- b. Reduced occurrence of off-ship Beyond the Capability of Maintenance actions.
- c. Increased level of planeside support and maintenance training/troubleshooting for sailors.

Public-Private Partnering: Awarded on 23 December 2005, FIRST is DoDs only firm fixed price Performance-Based Logistics (PBL) contract that simultaneously functions as a weapon system, subsystem, and component level PBL. FIRST, anchored by an extremely flexible sole-source Justification and Approval of \$2.9B consists of a 5-year contract starting at \$955M with a single 5-year unpriced option. With a one of a kind, non-severable Contract Line Item Number (CLIN) structure, FIRST allows the Navy to combine multiple colors of money (Aircraft Procurement Navy, Navy Working Capital Fund, Operational

Maintenance and Navy, etc.) and all 10 integrated logistic support elements into a single contract. This innovative CLIN structure all but eliminates the necessity for a single line of accounting allowing the Navy and Boeing to integrate all production and sustainment activities optimizing readiness and cost for the Fleet and the taxpayer. FIRST utilizes over 20 logistics metrics collected in the Navy's standard logistics information management system to measure performance. Metric performance has been stellar during this award period. Illustration 4 provides several examples of these outcome-based performance metrics. FIRST is Title 10 USC compliant, ensuring that core requirements are met using Commercial Service Agreements with Navy Fleet Readiness Centers (FRC) (Southwest, Southeast, and East). Boeing teamed with the FRCs to streamline depot induction time, provide web based asset visibility, online shipping instructions, and lean repair practices that have reduced repair cycle times and the logistics footprint through joint parts planning. FIRST continues to employ "lean six sigma" principles at the FRCs. Two recent events have reduced repair cycle time by 38% for canopies and 48% for tailhooks.

Systems Engineering Approach: FIRST identifies opportunities for supportability improvements and develops initiatives to capture cost avoidance associated with these opportunities. FIRST utilizes Class 1 Engineering Change Proposal (ECP) authority to reduce the average ECP cycle time from 242 days to 39 days. This velocity enables quicker change incorporation into attrition retrofits as well as into production aircraft. This reduces administrative costs and gets the change fielded quicker, thus reducing sustainment cost. Each of these improvements has enabled Boeing and the Navy to establish a dynamic, highly responsive support solution for the warfighter. The FIRST contract represents an

affordable approach to meeting Super Hornet support requirements without sacrificing combat capability.

Footprint Reduction: FIRST has significantly reengineered the Super Hornet supply chain through streamlined engineering and supportability change incorporation, joint Industry and Government Total Asset Visibility Tool, Fleet Hornet Support Centers, and the application of commercial support efficiencies and practices. Utilizing these initiatives and tools resulted in an average repair turnaround time of 45 days for FIRST components compared to an average repair turnaround time of 90 days for non-FIRST components. During the most recent performance cycle, FIRST provided an average 93% fill rate within 30 days for all high priority repairables, an average 96% fill rate within 30 days for all high priority consumables and an average 91% fill rate within 70 days for all low priority repairables and consumables. Additionally, FIRST has successfully filled 97% of all requisitions received since 1 July 2005. The ability to package sustaining logistics support with lean supply chain management techniques and tools including FIRST Class 1 ECP authority and supportability improvements have allowed FIRST to significantly streamline the logistics supply chain, thereby reducing inventory and creating a much smaller logistics footprint.

Obsolescence Management: The FIRST contract has an extremely robust Diminishing Manufacturing Sources and Material Shortages Plan that encompasses obsolescence management as one of its primary tenets. Boeing has excelled at managing obsolescence by initiating life-of-type-buys, developing new sources of supplies, and introducing engineering redesigns when necessary and in the best interest of the Fleet. Boeing estimates an obsolescence cost savings of approximately \$40M to date with additional cost avoidances realized over the life of the aircraft through its proactive obsolescence management.

Reliability, Maintainability, and Supportability Improvements: FIRST provides numerous opportunities that improve reliability, maintainability, and supportability but none are more effective than its robust Supportability and Cost Reduction Initiative Program. As demonstrated in Illustration 5, the Navy has projected savings and cost avoidances of approximately \$430M on a \$20M investment for a return in investment of 22 to 1. The ability to increase Mean Flight Hours Between Demand (MFHBD) demonstrates the effectiveness of the FIRST PBL contract at improving reliability. FIRST has provided an average MFHBD of 9.0 for FIRST components as compared to a MFHBD of 3.0 for non-FIRST items (see Illustration 6). Cannibalization rates are another great measure of a PBL's effectiveness regarding reliability improvements. FIRST has provided an average cannibalization rate of 1.1 for FIRST components compared to a cannibalization rate of 5.3 for non-FIRST items. The FIRST PBL improves Super Hornet component availability to the warfighter while reducing the cost of ownership. These improvements directly contribute to the overall aircraft performance resulting in overall mission success. Additionally, FIRST supply chain management processes and tools linked with total platform integrated logistics and Fleet support further enhances the PBL effects on the overall aircraft mission success.

Conclusion: FIRST delivers the best possible product to the dedicated men and women flying the Super Hornet during wartime operations. The warfighter and the taxpayer are the ultimate winners.

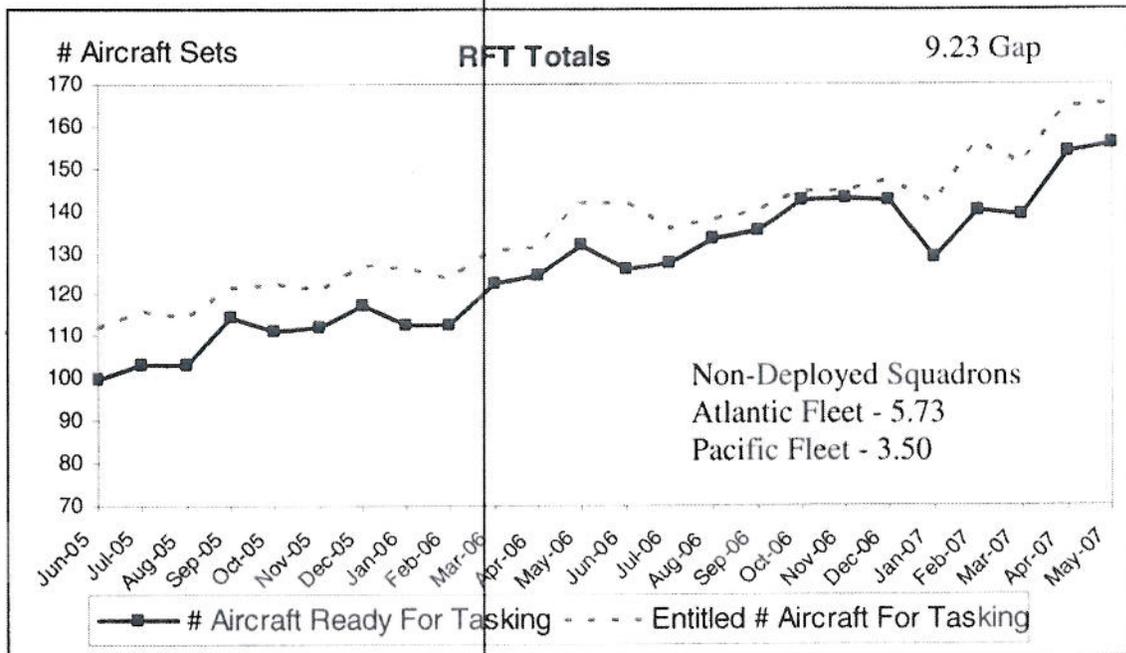


Illustration 1: Commander Naval Air Forces Super Hornet Ready for Tasking

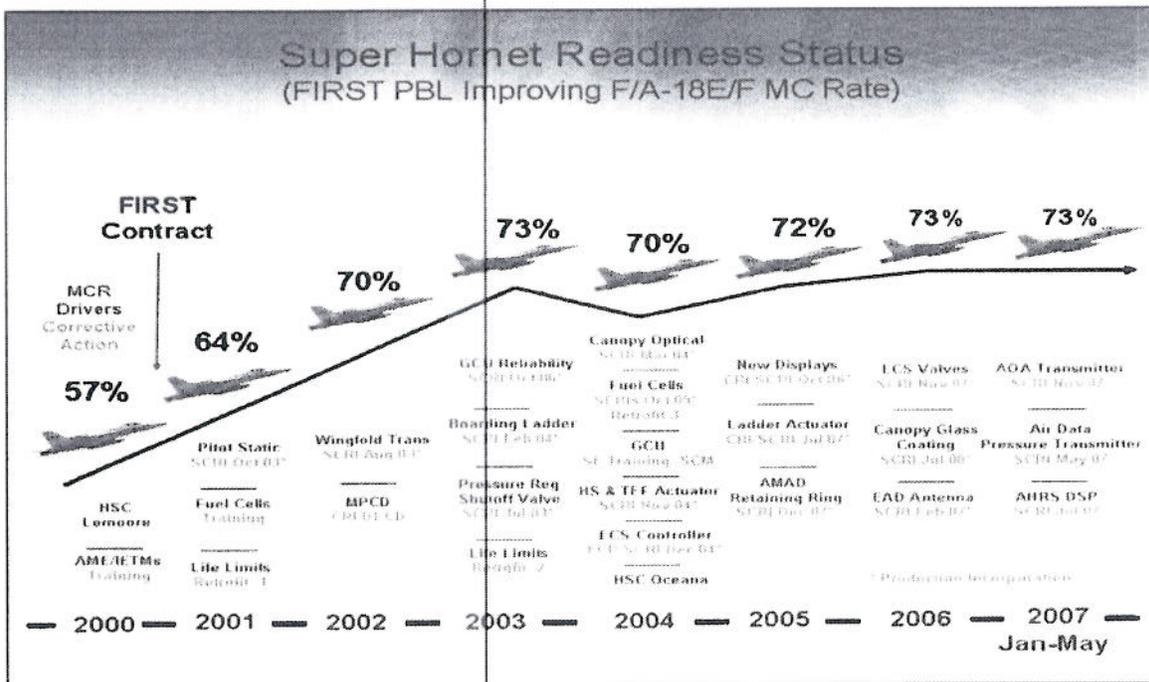


Illustration 2: Super Hornet Mission Capable Rate

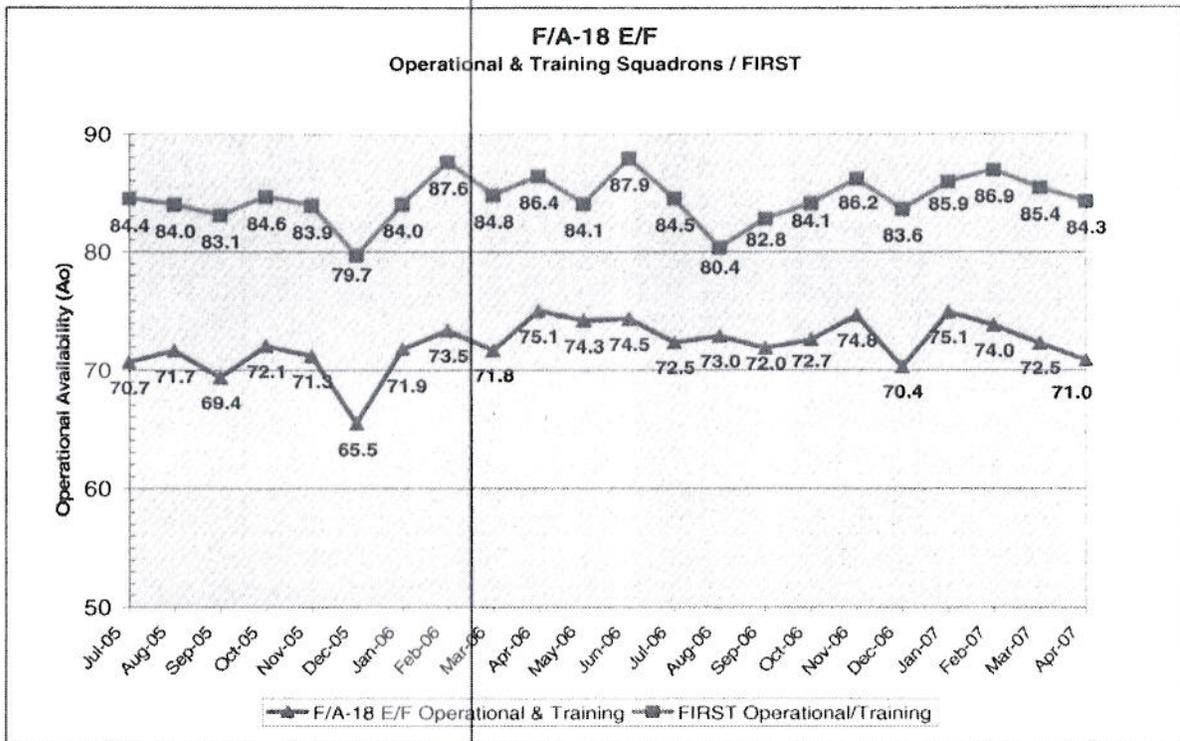


Illustration 3: Super Hornet Operational Availability (Ao)

Metric	Customer Expected	2006 Y/E	2007 YTD
Support Equipment			
SE Site Activation	90% Delivered	96%	90%
SE First Article Test Scheduling	95% FAT Schedule Incorp	100%	100%
SE Engineering Investigation Response Effectiveness	90% Response in 120 days	83%	90%
Support Equipment Recommendation Data (SERD) Submittal Effectiveness	80% - 90% submitted 90 days post PSECT approval	100%	90%
Hornet Support Network			
Request For Assistance (RFA)	80%-90% in 2 hrs	100%	100%
Request For Information (RFI)	80%-90% in 3 working days	92%	95%
Depot Capability			
Component Capability	80%-90% within 45 days past CAP Date	93%	100%
Component Capability Requirements Support	Subjective		
Site Activation	Subjective		
Automated Maintenance Environment (AME) Support Responsiveness	82 - 89% within 4 hours	99%	97%

Illustration 4: Sample FIRST Outcome Based Performance Metrics

SCRI: \$19.8M investment for \$430.2M cost avoidance

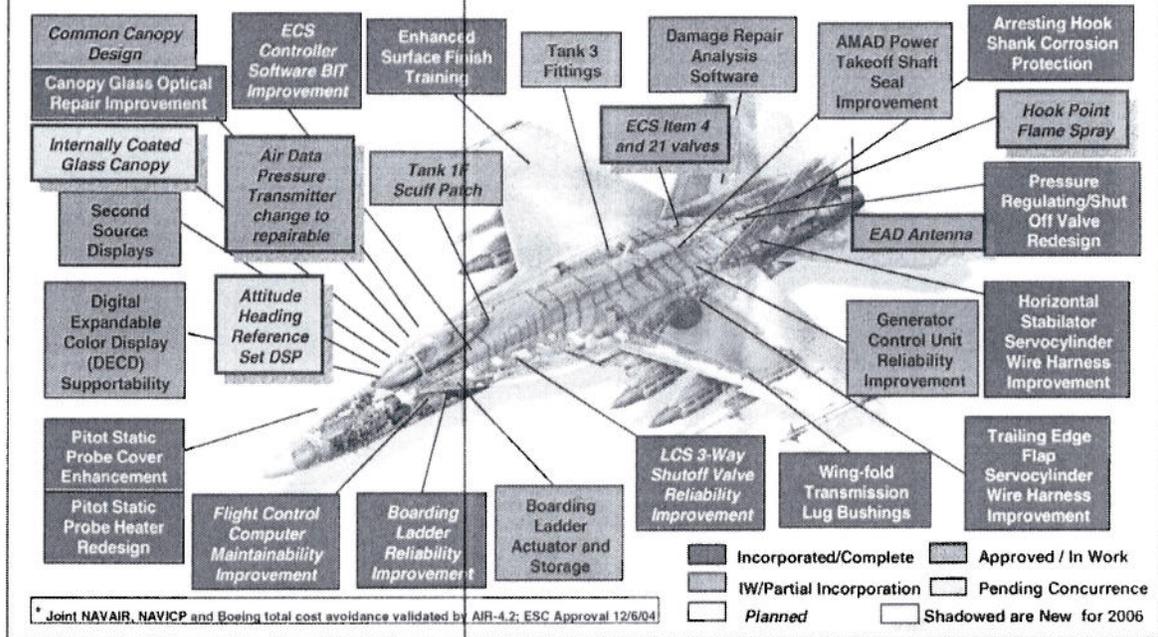


Illustration 5: Supportability and Cost Reduction Initiatives

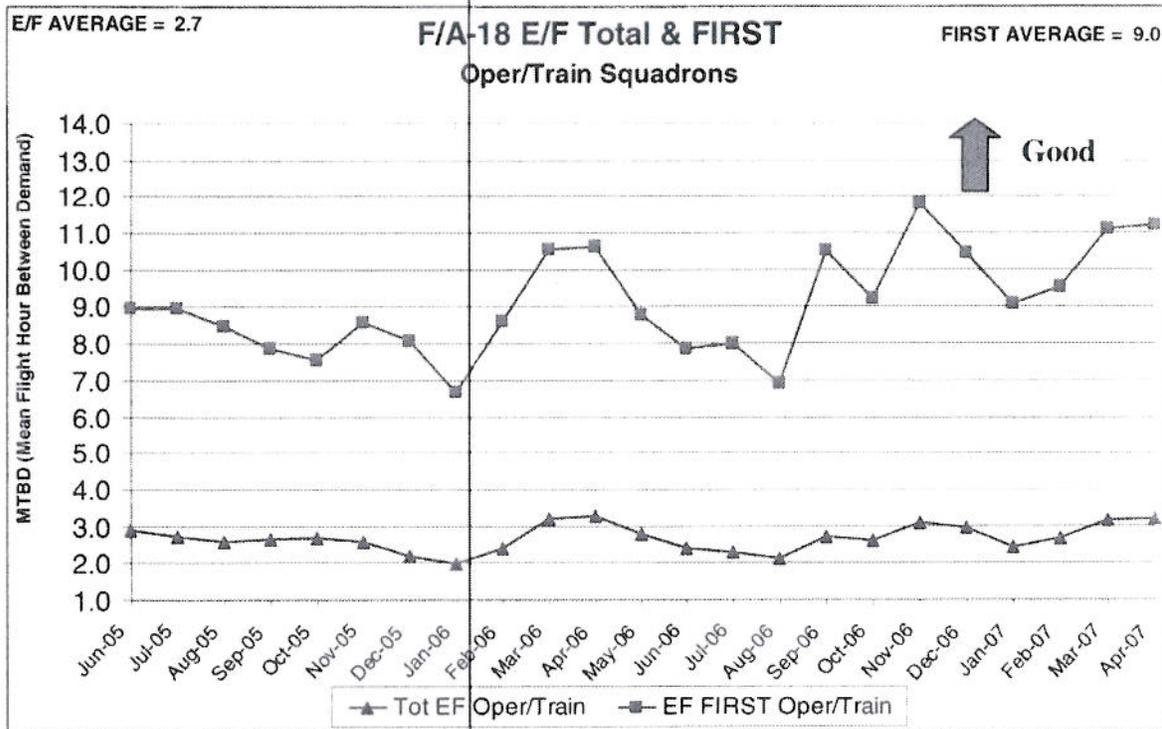


Illustration 6: Super Hornet Mean Flight Hours Between Demands

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Section 4
Achievements**

The F/A-18 Integrated Readiness Support Teaming (FIRST) contract improves F/A-18 availability by delineating specific performance goals, providing financial incentives for attaining these goals, ensuring that responsibilities are clearly assigned, and facilitating the overall life-cycle management of Super Hornet reliability, supportability, and total ownership costs. FIRST increases the efficiency and effectiveness of the Super Hornet by uniting the responsiveness of industry, with the expertise and capacity of the Navy's organic support activities. This truly transformational performance based logistics approach was jointly crafted by a government / industry team to provide Naval Aviation with increased mission performance, without adding burden to Fleet personnel by procuring outcome based logistical support vice large inventories. The government utilizes the financial incentives in FIRST to increase the reliability, flexibility, and responsiveness of the supply chain. Industry utilizes the increased authority in FIRST to exploit commercial best practices performing several functions previously executed by the government. The ultimate winners are the warfighters and taxpayers since FIRST provides them with an agile, streamlined support system that has significantly reduced logistics cycle time and multiple levels of spare parts inventories.