



Consolidated Automatic Support System (CASS)



PBL Success



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NAVAIR PMA260

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PBL Success

- The CASS Program won the FY09 Secretary of Defense Performance-Based Logistics award for providing our warfighters with exceptional operational capability through a PBL agreement.
- CASS PBL Team:
NAVAIR – NAVICP – Lockheed Martin Simulation and Training Systems (LMSTS), Orlando FL
- The CASS PBL has reduced cost by 20% while adding capabilities and increasing the number of items supported.

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PBL Teams Honored with Secretary of Defense Award

BAE Systems, GE Aviation and Lockheed Martin Corporation and their service partners were recognized Wednesday with the fifth annual Secretary of Defense Performance-Based Logistics Awards.

Developed by the Defense Department, the Defense Acquisition University and AIA, the awards recognize excellence in providing our warfighters with exceptional operational capability through PBL agreements. They are made to system, sub-system and component teams.

"Performance-based logistics definitely provides an edge to the business of weapons systems management," said Marion Blakey, president and CEO of AIA. "The pressures on our maintenance and modernization budgets make these types of partnerships a cost-effective model for the future."

The system-level awards were made to Lockheed Martin's Consolidated Automated Support System-Navy partnership and the High Mobility Artillery Rocket System-Army team.

HIMARS maintains an average system status readiness of more than 95 percent and a 99.9 percent material availability, providing an estimated \$7.65 million cost avoidance during 2009.

CASS has documented \$2.9 million in savings and cost avoidances for the government, as well as maintaining an average supply material availability of 99 percent for repairable items and 98 percent for consumable costs throughout the life of the program.

GE Aviation and the Defense Logistics Agency, and BAE Systems and the Navy received the sub-system awards. The GE-DLA award was for the performance of the F404 engine PBL agreement, which resulted in a cost savings of \$53.4 million.

BAE Systems and the U.S. Navy achieved a cost avoidance for a five-year contract period of \$2.1 million for the AN/ALQ-126B electronic countermeasures system. The integrated team approach to analyzing warfighter demand, planning spares stock levels and piece parts led to 99.8 percent guaranteed availability for 50 months.

Lockheed Martin and the Navy won the component-level award for the AN/UYQ-70(V) Advanced Display Screen. With commercial-off-the-shelf equipment and a successful technology refresh initiative, the program generated cost savings of more than \$1.5 billion over 15 years.

The awards were made during AIA's Product Support Conference in Hilton Head, South Carolina.



Outline

- **PMA260 / CASS**
- **Challenges**
- **PBL Description**
- **Keys to Success**
 - **Period of Performance**
 - **Understanding the Customer Base**
 - **Measurable Performance**
 - **Team Work (Partnership)**
- **Take-Aways**



PMA260 Overview

- Provide cost-effective aviation **common support equipment** in support of fleet operations and maintenance activities. Fund requirements for replenishment of peculiar support equipment for out-of-production weapon systems
- Scope:
 - 2,482 total different end items of Aviation Support Equipment
 - 153 funded programs across the FYDP
 - 124 current contracts in place
 - Current designated programs:
 - 1 ACAT II = Consolidated Automated Support System (CASS)
 - 4 ACAT IVM
 - Hydraulic Power Supply System
 - Land Based Mid Range Tow Tractor
 - Legacy Automatic Test Equipment Offload to CASS
 - eCASS
 - 52 Abbreviated Acquisition Programs (AAPs)





CASS Description

- CASS is used to test both WRAs (Weapons Replaceable Assemblies) and SRAs (Shop Replaceable Assemblies = Circuit Cards and Modules)
- Provides the latest testing technologies to support Intermediate and Depot level testing of current and future USN/USMC electronics, avionics, and missile systems
- Mainframe CASS was initially designed in the late 1980s and produced from 1992 through 2003 via 3 Blocks and 12 production lots
 - 553 systems delivered

H-60



EA-6B



E-2C/D



V-22



H-1



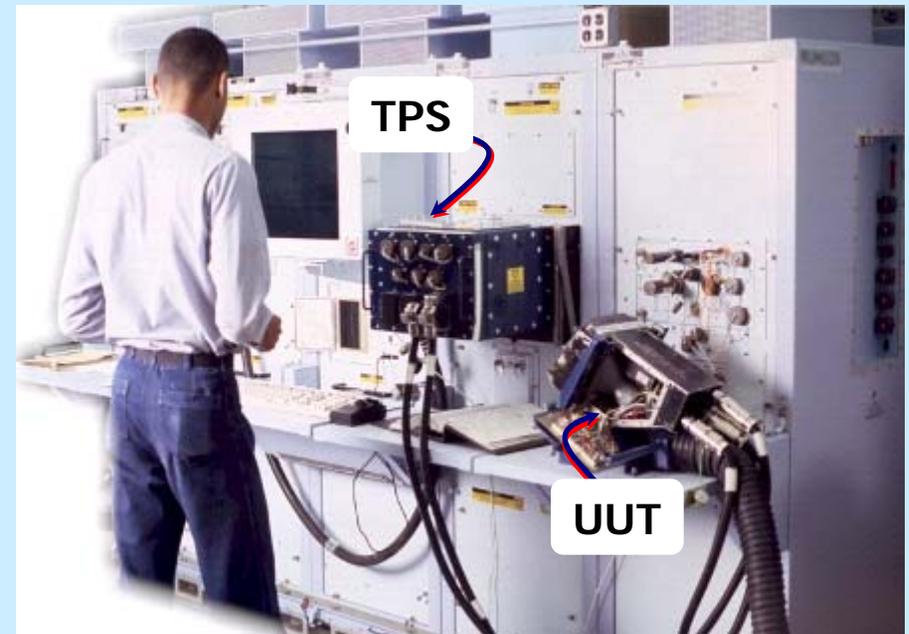
F/A-18C/D/E/F/G



T-45



AV-8B

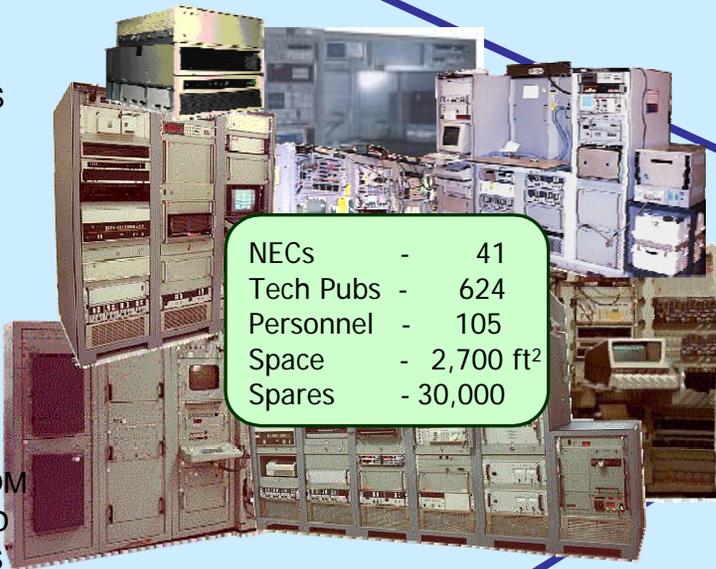




Legacy Automatic Test Equipment Transition to Consolidated Automatic Support System (CASS)

\$3.8B in Reduced Total Ownership Costs

APM-469 RSTS
AN/USM247 VAST
AAM-60 EOSTS
AN/USM470(v)2 TMV
AN/USM614 ESTS
AN/USM403 HATS
AN/USM470v(1) ATS
AN/USM604 EETS
AN/APM446 RSTS
AN/AWM23 RFTS
AN/AWM23 LFTS
AN/AWM23 C&D TS
AN/AWM23 CTS
AN/ASM-686 IATS
AN/USM484 HTS
AN/USM629 EOTS
AN/USM467 RADCOM
AN/USM429 CAT IIID
AN/USM458 NEWTS
OJ-615 EA-6B HP
OJ-510 DTB
APM457 S-3
AN/ASM-608 IMUTS
A/E24T-205 Electrical Test Set
AN/ARM-146 Decoder TS
GACT/GRAD



NECs	-	41
Tech Pubs	-	624
Personnel	-	105
Space	-	2,700 ft ²
Spares	-	30,000



NECs	-	5
Tech Pubs	-	4 disks
Personnel	-	54
Space	-	1,900 ft ²
Spares	-	3,800



CASS Support Challenges

- How to support multiple customer requirements using a single contract vehicle/different colors of money
- Ensuring long-term sustainment for 30+ year lifecycle
 - Obsolescence mitigation
 - Supplier/OEM base retention
 - Reliability improvements
 - Sustainment Engineering
 - Technology Insertion
- Integrating 16 OEMs and 21 Suppliers
- Managing a complex supply chain for both Fleet (NAVICP) and Non-Fleet (Depots, FMS, Contractors, International) requirements



The CASS PBL Description

- Contract:
 - 7 Year IDIQ PBL Contract with Lockheed Martin; FAR Part 15, Competitive Award
 - \$410M Fixed Price Contract that provides a Yearly Per Station Rate
 - *Full / Basic / Limited / Fleet*
 - *Supports 191 repairable items and 573 consumable items for Fleet Service*
 - *Supports 215 repairable items and 2217 consumable items for Non-Fleet Services*
- Performance Requirements:
 - Fleet Support Service = 100% High priority requisitions (Broad Arrow) response within 24 hours, Low priority requisition response within 30 days
 - Full Service = 85% Ao / Basic Service = 70% Ao / Limited Service = 72 Hr Response
- Program Scope:
 - Supply Chain Management (CAV-EDI)
 - Logistics Management
 - Depot Level Repair & Calibration
 - Configuration Management
 - Obsolescence Mitigation
 - On-Site Field Service
 - Sustaining Engineering
 - Reliability Improvement Program
 - System Level Installation Support
 - Spares Procurement
 - Technology Insertion
 - 800 Hot-Line



Period of Performance

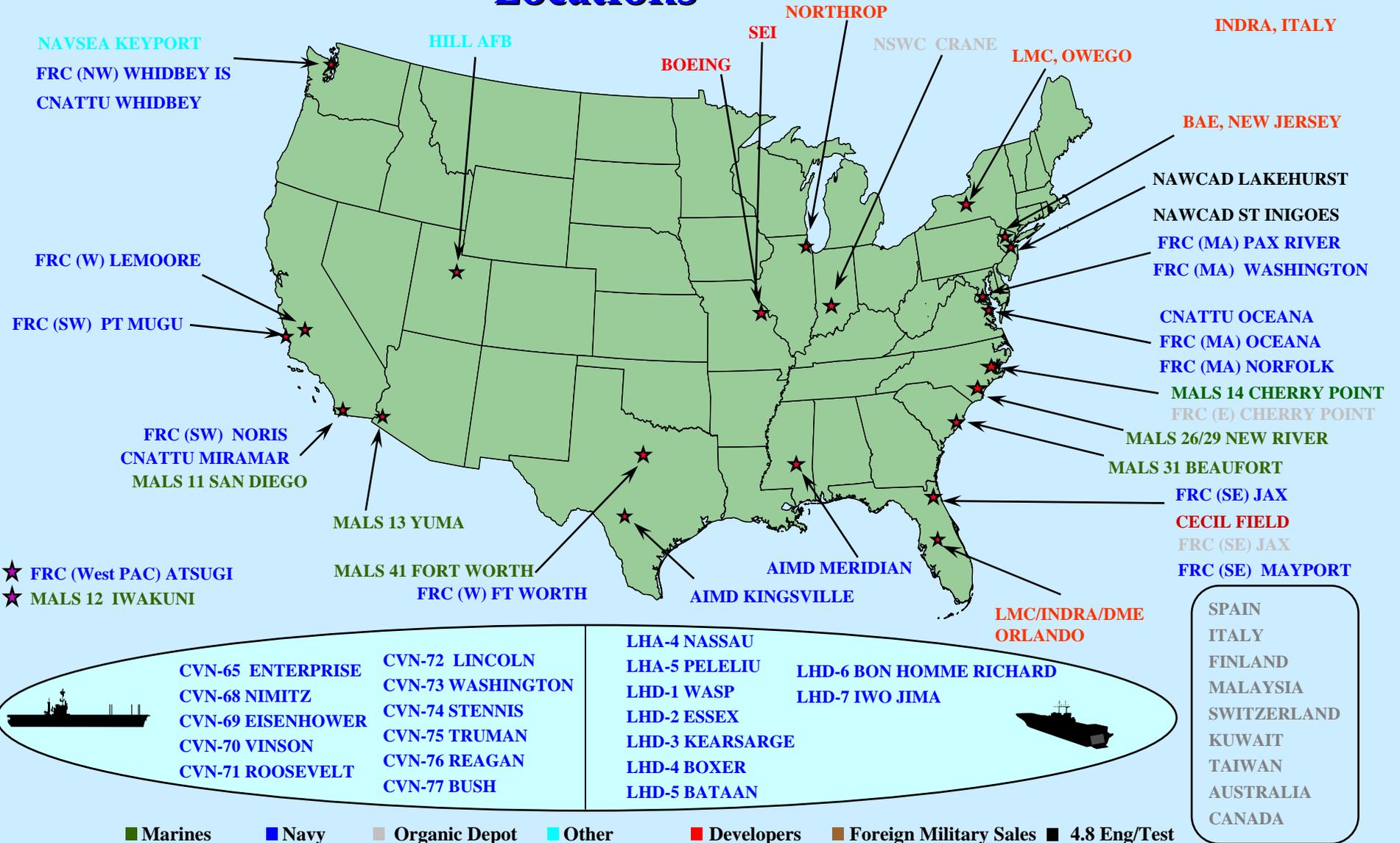
The longer the better

- Five year contract with two one year options (7 years total) that provides support until 2015
 - Prior to 2008, 8 year CSP (PBL) with LMSTS that started during production
- Originally wanted to compete a 10 year PBL contract
- Feedback from industry day emphasized the financial benefits of longer term PBL contracts
- Long term contract enables LMSTS to lock sub vendors /suppliers into agreements until 2015
 - Creates an incentive for cost savings and reliability improvements that benefit the Fleet and the vendors bottom-line
- What do we do until CASS is retired in 2022?
 - Plan to minimize future obsolescence issues prior to 2015



Understanding the Customer Base

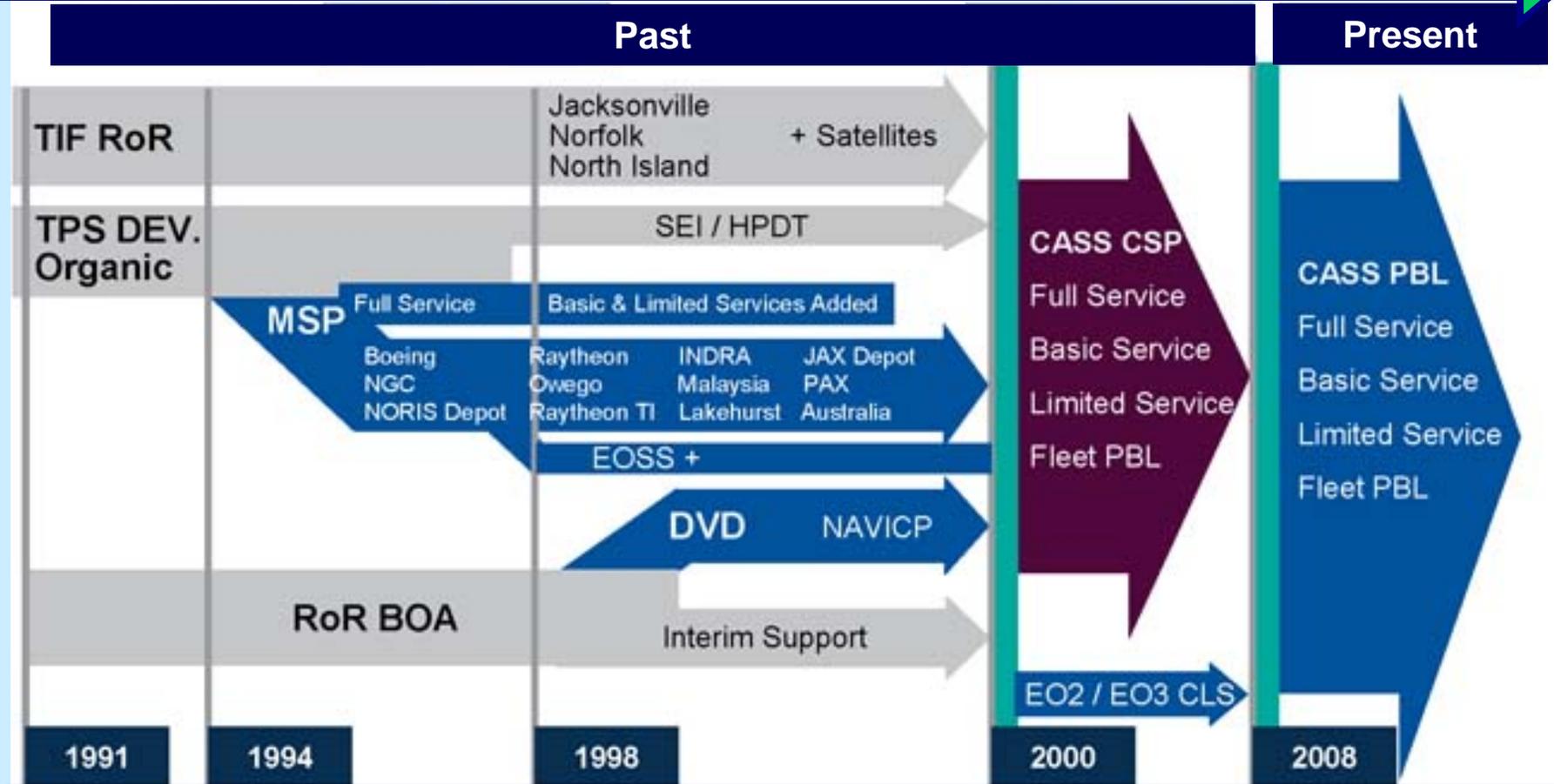
Locations





Years of Understanding CASS Demand Data

Data Collection and Analysis – Logistics IT Solution (ADIS)



CASS data analysis experts were grown in both the government and industry

Forecasting customer demand improves every year to reduce risk



Customer Trend Analysis

Readiness Reliability Team (RRT)

- Evaluates CASS component failure data for use in failure and trend analyses, corrective action development and verification of corrective action effectiveness
- Items identified as having reliability and supportability issues are analyzed and then solutions are developed and implemented by the support team

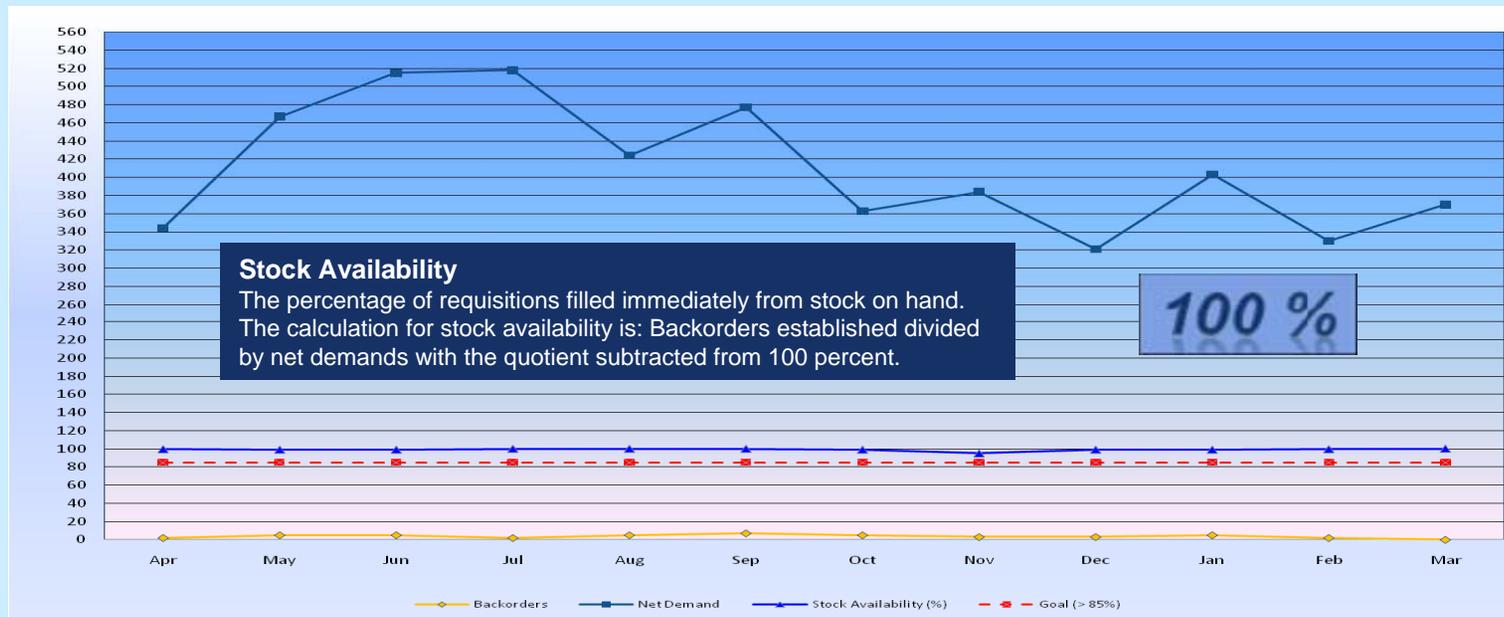
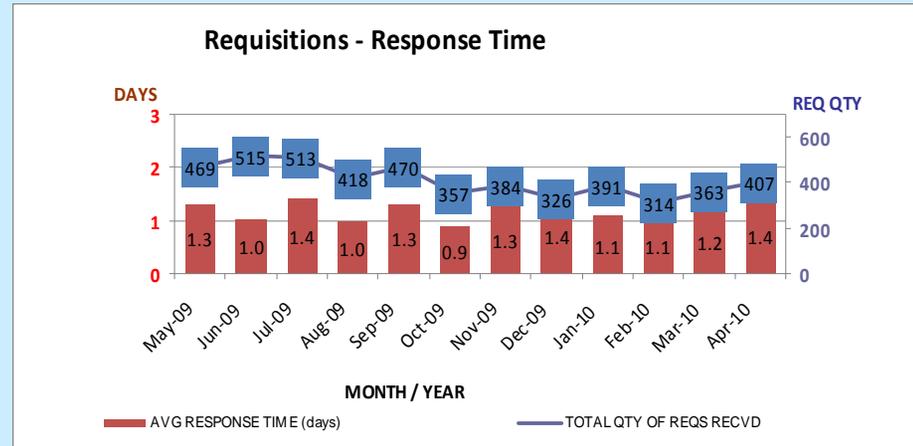
Example: Reduced sailor induced failures on the CASS Digital Test Unit (DTU) backplane

1. *Removal of the backplane for maintenance is extremely difficult and it would require many maintenance man-hours. LMSTS documented the causes and resulting costs of these induced failures.*
2. *As a result of an RRT investigation, a Job Performance Aid (JPA) was developed by the logistics/engineering team to demonstrate step-by-step removal of the DTU backplane. The JPA is an exact video-based depiction of the technical manual procedures.*
3. *Since the JPA was issued, there have been zero induced failures on the DTU backplane and demand has decreased from twelve to four per quarter.*



Measurable Performance

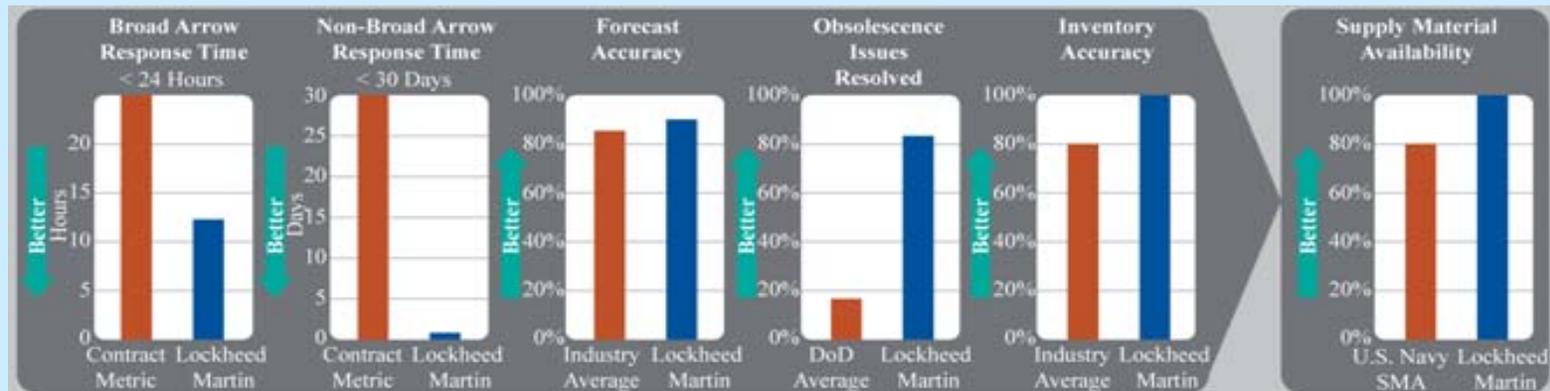
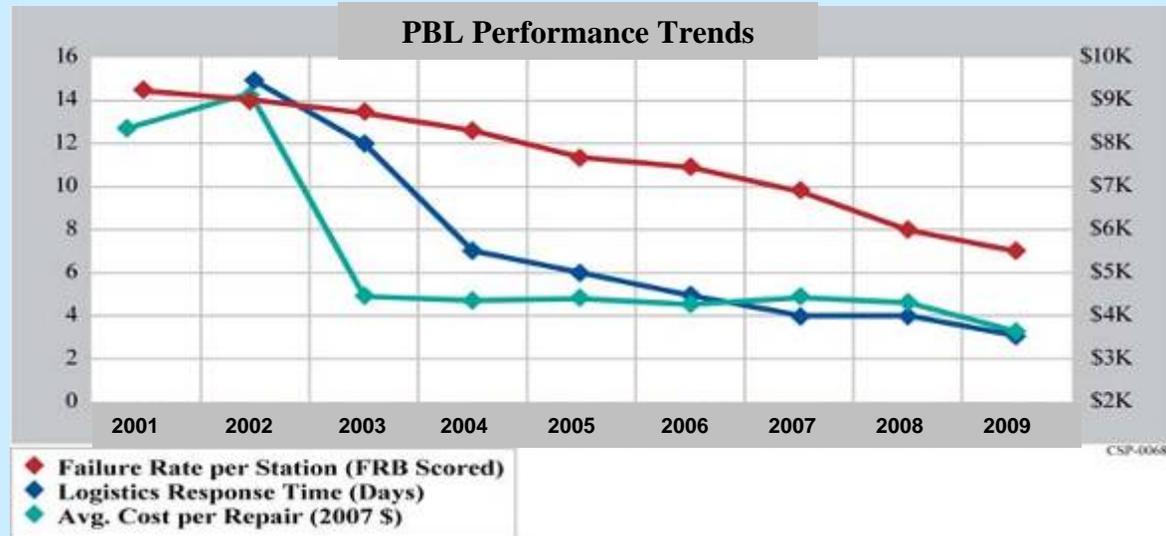
- Performance goals are well defined and data is readily accessible to measure
- Quarterly data reporting analyzed by the LMSTS and Government Team





Measured PBL Results

- The failure rate per station, logistics response time and average cost per repair has seen significant reductions
- CASS Fleet readiness is well over 90%



PBL Performance Measures Show Improved Fleet Readiness and Lowered Sustainment Cost



Team Work (Partnership)

Common goal for the team:

Support the Fleet

- Trust – Long term relationships
- High caliber team members
- Recently worked together to address battery safety issue by quickly replacing old batteries





Partnering to Manage Obsolescence

Successful obsolescence identification and mitigation program

- Team aggressively employs Diminishing Manufacturing Sources and Material Shortage (DMSMS) meetings, supplier symposiums, and reliability improvement initiatives.
- Team utilizes the Megaboard database, whose output tracks the availability and support status of every CASS asset through 2022 and produces a projected stock depletion date driving further logistics decisions.
- All CASS suppliers, including COTS suppliers, are formally surveyed annually to ensure that they will be willing to continue long term support.
- To alleviate DMSMS issues where OEMs have elected to discontinue support, LMSTS has taken over support of assets or transitioned repairs to third party suppliers.
- LMSTS has also initiated life time buys to be held in reserve.



CASS PBL Take-Aways

- Consolidating multiple support programs into one produces significant cost savings
- Having Government/Industry commit to long-term supportability goals during production phase provides sustainment options once production ends
- Data is important – understanding it is critical
- Ensure there is a full understanding of the PBL requirements and expected outcomes
- Reliability improvements deliver increased efficiencies and reduced costs to both industry and DoD
- Proactive obsolescence screening/mitigation is paramount to success when supporting older products
- Government/Industry team working together for a common goal:

Support the Fleet



Questions?



PBL Service Levels

PBL Service Levels			
<ul style="list-style-type: none"> • Full Service <ul style="list-style-type: none"> – 85% Ao – Onsite FSR – Asset Repair – Onsite Spares – Onsite SE – Proactive Obsolescence Mitigation – Reliability Monitoring – Sustaining Eng – TPS Hot Line – Configuration Control – Supply Chain Management – Import/Export 	<ul style="list-style-type: none"> • Basic Service <ul style="list-style-type: none"> – 70% Ao – On-Call FSR – Asset Repair – Spares Access – SE Access – Proactive Obsolescence Mitigation – Reliability Monitoring – Sustaining Eng – Configuration Control – Supply Chain Management 	<ul style="list-style-type: none"> • Ltd Service <ul style="list-style-type: none"> – 72-Hr Asset Onsite – 30-Day ROR TAT – Phone Support FSR – Asset Repair – Spares Access – Proactive Obsolescence Mitigation – Reliability Monitoring – Sustaining Eng – Configuration Control – Supply Chain Management 	<ul style="list-style-type: none"> • Fleet PBL Service <ul style="list-style-type: none"> – 24-Hr Broad Arrow – 30-Day ROR TAT – Asset Repair – Spares Access – Proactive Obsolescence Mitigation – Reliability Monitoring – Sustaining Eng – Configuration Control – Supply Chain Management
<p>Intended for TPS Development & High Risk Production Customers</p>	<p>Intended for Medium & Low Risk Production Customers that need us to Perform Maintenance</p>	<p>Intended for Low Risk Production Customers That Have Their Own Maintainers and SE</p>	<p>Intended for Fleet Customers That Have Their Own Maintainers and SE</p>