

Honeywell Total Logistics Support (Component Level)



- **Based on Commercial “Maintenance Service Agreement”**
- **“Corporate Contract” Awarded June 2000 to Provide Support for APUs Used on the C-2, F/A-18, S-3, and P-3 Aircraft**
- **Navy’s First Public / Private Partnership**
 - ✓ **NADEP Cherry Point... Touch Labor**
 - ✓ **Honeywell... Program Management**
- **10 Year Performance Based Contract, Firm Fixed Price (5 Year Base & 5 One-Year Incentive Terms)**
- **Availability, Reliability Increases Guaranteed**
- **Delivery Guarantees... 2 Days (IPG 1)**
- **Priced by the Flight Hour**
- **TAV- Requisitions/Data Via EDI and Web**
- **Obsolescence Management**
- **Product Support Engineering**
- **Surge Capability... 120% of Annual Flight Hours**
- **Added C-130 APU in FY02, P-3 EDC in FY03 and F404 MFC in FY04**



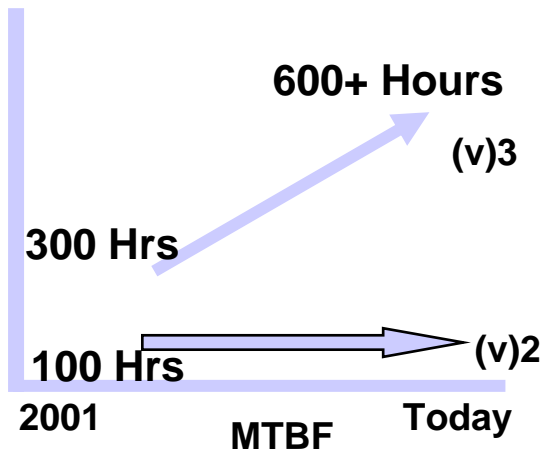
All Inclusive “No Excuses” Performance



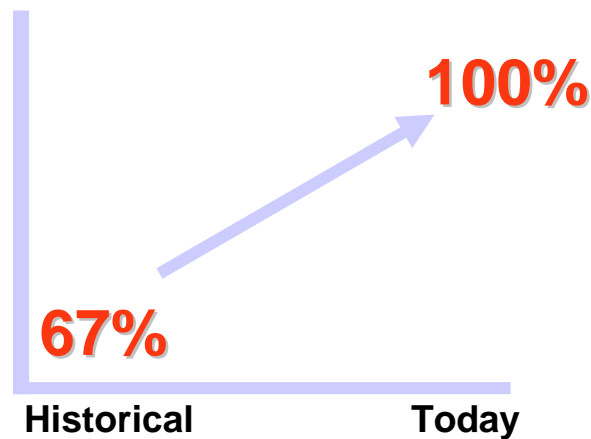
ALR-67(v)3 PBL Results

ALR-67(v)3 Radar Warning Receiver

Reliability



Availability



Obsolescence Management and Technology Insertion

- ✓ V(3), Included in PBL
- ✓ V(2), Over \$200M in ECPs
- ✓ V(3), e.g. Analog Encoder Replaced With Digital Encoder (Lowers Cost, Far More Reliable, Less Prone to Obsolescence, Reduces Heat Signature)
- ✓ V(3), Ser # Configuration Status Accounting (As Built/As Repaired)

***Bottom Line: Better Product,
Better Support, Lower Total
Ownership Costs!***

Performance-based Logistics Successes

Boeing / Parker C-17 PBL

- Parker is responsible for availability of Parker C-17 BOM at the Boeing Atlanta warehouse
- Parker is paid by the flight hour
- The support chain operates as a “pull” system (Lean)
- Parker is incentivized for reliability improvement
- The real strength is the alignment of goals:
- Issues in execution
 - Unauthorized changes to wholesale / retail allocations
 - Items from wholesale added to WRSP kits without placing a spares order, wholesale side can be shorted
 - Short-time “borrowing” for deployments
 - Changes in use and operation of C-17 aircraft
 - Timely and accurate information
 - Lack of integration of information systems
- Boeing, USAF, and Parker are pleased with the results

Has the workforce (government and industry) been effectively trained on PBL principles?

**Is the lack of financial enablers to
accomplishing PBL still an
impediment?**

(a) Specific funding authority.—The Secretary of Defense may use Operation & Maintenance (O&M) funds on Performance Based Logistics (PBL) contracts to finance both expense and investment costs associated with the implementation of engineering changes that result in a reduction of operation and maintenance costs.

(b) Establishment of Regulations.—The Secretary of a military department shall notify Congress 30 days before entering into a PBL contract under this section, that may result in using O&M funds for engineering changes. The notice shall state that—

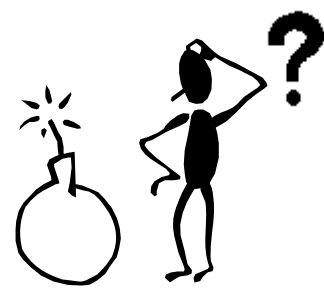
- (1) the department has performed a business case analysis; and
- (2) based on the business case analysis, there is a reasonable expectation that the proposed PBL contract will result in an overall reduction of operation and maintenance costs.

➤ Class I ECP Driving this Requirement

- ✓ T-45 Engine Surge – addressed by PBtH PBL
- ✓ Industry / Gov share risk
- ✓ Cost-Wise Readiness (\$131M LCC Savings)

- System Level Type PBLs vs. Sub-System PBL Directly with OEMs (i.e. APUs, Engines, Radars, etc)
- **Aircraft “Tip to Tail” Type and Engine PBLs May Require Funding From Multiple Appropriations, Each With Constraints, to Fund Single Line of Accounting “No Color of Money”, Multi-Year PBL**
 - ✓ **No Appropriation Specifically for Funding PBL**
 - ✓ **Multiple Year Contracts Using One Year Appropriations (e.g. 1A/5A Depot Repair O&M)**
- **Joint PBL Efforts, Air Force TSSR Approach with Contractor ICP vs. Navy NWCF Funded PBLs (e.g. V-22, JHMCS), FMS Participation**
 - ✓ **Supply Vs. Services Contracts**
- Contracting Policy/Regulation, Cost Reporting and Use of FAR Part 12
- PBL BCA Policy, Guidance
- PBL Not Synonymous With CLS....Lack of PBL Understanding by Contracting, Budgeting and Legal Communities

PBL Issues/Solutions



Issue	Description	Possible Solutions
Financial Processes	Color of Money	Make case to Congress
	Control/Fragmentation of Funds	Services can consolidate
	Lack of Funding Stability	PBL benefits require this!
BCAs	Confusion re Purpose; Lack of know-how; Costly workload	Clarify guidance (DAG); Don't feed the cults
Partnering	Some Depots see PBL as threat	Education; can gain workload
Cultural & Training	Contracting, Financial, Legal communities unfamiliar with PBL concept	Improve cross-functional PBL training, including Industry
Challenges	Complex programs struggling with PBL implementation	Hard work; Don't give up; PBL Works!
PBL Evolving	Trend away from platform PBLs to sub-system, component PBLs	Horizontal/Vertical integration; Warfighter needs

**What is the essential purpose of a
BCA and how does that intended
purpose align with PBL
implementers are doing?**

Business Case Analysis



•“BCAs will be conducted to assess changes from existing product support strategies for legacy systems and to support the product support strategy for new weapon systems”

•USE #1: Legacy Systems

- *Difficult for Legacy Systems to do “wholesale transition” to PBL*
- *More likely: PBL at Subsystem, process level (upgrade, mod)*

USE #2: New Weapon Systems

- *PBL is default support strategy (unless waived)*
- *Best allocation of workloads*
- *Most affordable solution*
- *Compliance with Statutes and Policy*
- *Best use of Partnering opportunities*

The BCA serves to determine the best mix of organic, contract, and statutory factors in optimizing the chosen approach.

Has the length of time to put a PBL contract in place improved over the last few years?

FIRST FY06 to FY10



Contract Overview (System Level)

- Awarded 23 Dec 2005
- \$995M Firm Fixed Price Contract with Performance Requirements
- 5 Yr Base Contract with a 5 Yr Option
- Combines Previously Separate Supply and ILS FIRST Contracts, covering 73% of the Super Hornet
- NAVICP Awarded; NAVAIR to MIPR Funds to NAVICP
- Fleet Driven Incentive Metrics: Increase Readiness at a Reduced Cost
- Expanded J & A with Built-In Flexibility to Support all F/A-18 T/M/S
- Joint BCAs that supports Contract Award and PM Life Cycle Decision

F404 PBL (F/A-18A-D, Sub-System Level)



- Four and 1/2 Year Firm-Fixed Price Contract Base Period; Five One Year Additional Ordering Periods
- \$510M, Second Largest Aviation Fixed Price PBL Contract...BCA Projects \$79M in Cost Avoidances
- Includes 36 F404 Major Sub-Assemblies Covering 1895 Engines
- Covers the Overhaul of the Major Sub-assemblies Regardless of Quantity Repaired/Replaced
- Provides Flying Hour and War Time Surge Flexibility
- Measurable Performance Metrics (LRT, SMA and Durability)
 - ✓ 85% Availability; Disincentives for Lower Than 75%, Incentives Up to 3% for 90% Availability
- Public Private Partnership With NADEP Jacksonville- Leverages OEM “Best Practices” Efficiencies (i.e. Six Sigma, Lean)



Exceeding Expectations!

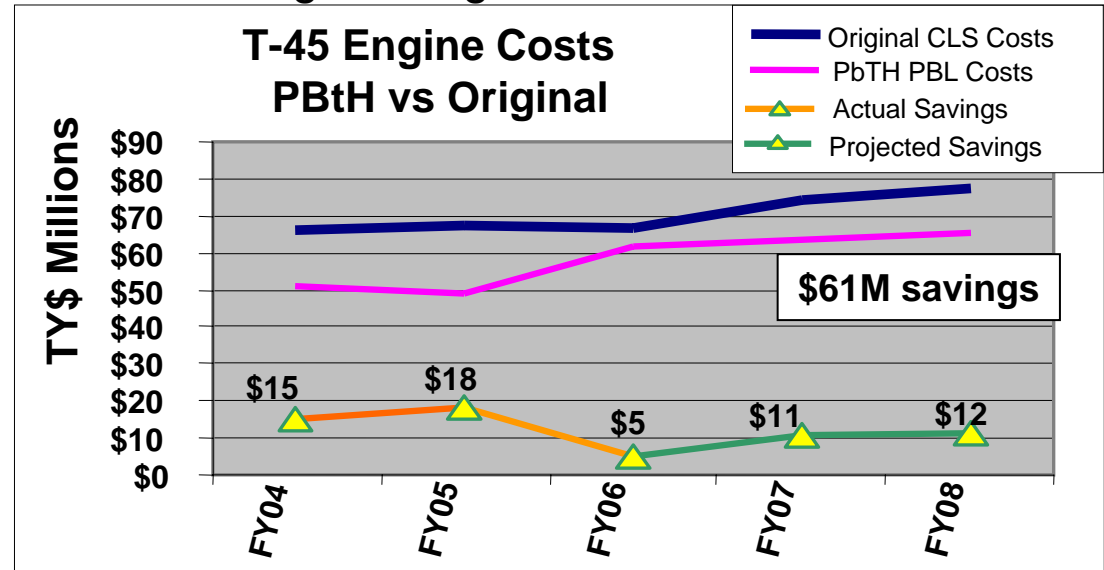
- ***100% Total Backorder Reduction Contract-to-Date***
- ***Availability 96% (Historical, 43%)***
- ***TAT Reduced by 25%; Backlog Reduced 50%***

Improving F404 Availability While Reducing \$/EFH Cost

T-45 F405 PbtH™ Contract



- FAR Part 12 Contract Awarded Oct 03; 1 Year Base Plus 4 One Year Options (FY04 – FY08)
- Performance Standards (i.e., Quality, Quantity, Availability, Timeliness) tied to Performance Requirements; All-Inclusive: Engineering, ILS, RCM
- Original BCA Projected \$26M O&M Cost Savings
- Updated BCA Projects \$61M O&M Cost Savings
- Government & Contractor Goals Aligned
 - ✓ Increased Time on Wing
 - ✓ Increased Reliability
- Engine Availability Contractual Requirements
 - ✓ FY04 = 80% of Engine Inventory
 - ✓ FY05 – FY08 = 85% of Engine Inventory
- MTBF Contract Metric is 580-640 Hours MTBF; Currently Over 900 Hours MTBF With Plans to Approach 2000 Hours; Availability Over 85%



**Is the warfighter/operational user
aware of the benefits PBL is
providing?**

What have been the summary findings of our “auditor friends” in assessing PBL implementation?

PBL WORKS!

Even the GAO Must Admit...



- GAO PBL Report 05-966 Sep 2005
- Examined 15 PBL programs
 - USAF (C-17, F-117, JSTARS, C-130J), ALR-67 (V3),
 - Navy APUs, F/A-18 E/F, F-404 engine, T-45 engines, V-22 Engines, KC-130J
 - Army HIMARS, Javelin, TOW ITAS, Shadow TUAV

“Of the 15 programs, 10 reported that performance levels exceeded contract requirements, and 5 reported that performance levels were meeting contract requirements.”

Is PBL “over”, “dead”, or “on the ropes”or, vibrant and morphing into even bolder joint capabilities enabling approaches?

Evolution of DoD Support Strategies

From Outputs... → **To Outcomes...**



Next...

Expanding the Performance Concept

- **Outcome-based Approach**
 - Enterprise-wide, Life Cycle focus
 - Full System accountability
 - Alignment of resources to Outcomes
- 

Early 2000s

Performance Based Logistics & TLCSM

- **Partial movement to Outcomes**
- PM Life Cycle focus
- Better System accountability
- Improved alignment of resources & outputs

1990s

Performance Spec Functional Transactions

- **“What”, not “How” at transaction level**
- No life cycle focus
- Still no System accountability
- Weak alignment of resources & outputs

1980s

Mil-Spec Functional Transactions

- **“What” & “How” defined at transaction level**
- No life cycle focus
- No System level accountability
- Non-aligned resources & outputs





Proposed Path Ahead

- **Move to Enterprise-wide Outcome-based Framework**
 - Aggressively implement performance outcomes in both the Public and Private support base
- **Across the Life Cycle**
 - Standardized Outcome-based Metrics
 - Defined early in the Acquisition Process
 - Facilitating cross-functional integration
 - Capabilities-based requirements (JCIDS)
 - Sustainment KPP/KSAs
- **Build On Successes**
 - Performance Based Acquisition (PBA) and Performance Based Logistics (PBL)
 - Continuous Process Improvement (CPI)



Moving Beyond PBL: Performance Driven Outcomes (PDO) Strategy

**Based on
Results**

ASSURED CAPABILITY

Material and Non-Material Capabilities
Integrated Across the Enterprise to Accomplish DoD Mission

Empowered

CLEAR OWNERSHIP

Life Cycle Accountability/Responsibility

Linked

FULLY-ALIGNED FRAMEWORK

Recognition of Internal and External Shareholders
Stakeholder Expectations Established by Formal Agreements
Resources Linked to Metric-based Outcomes

Optimized

BEST PROCESSES & TOOLS

Use the Most Efficient Means to Optimize
Processes and Minimize Life Cycle Cost

CPI (Lean 6 Sigma,
TOC, CBM+, etc.)

PDO is a Metrics-Based, Enterprise-wide Strategy that
Achieves Planned Outcomes by Establishing Authority, Assigning
Responsibilities and Applying Optimized Processes and Resources

Your Turn!!



Challenge us with your questions and thoughts

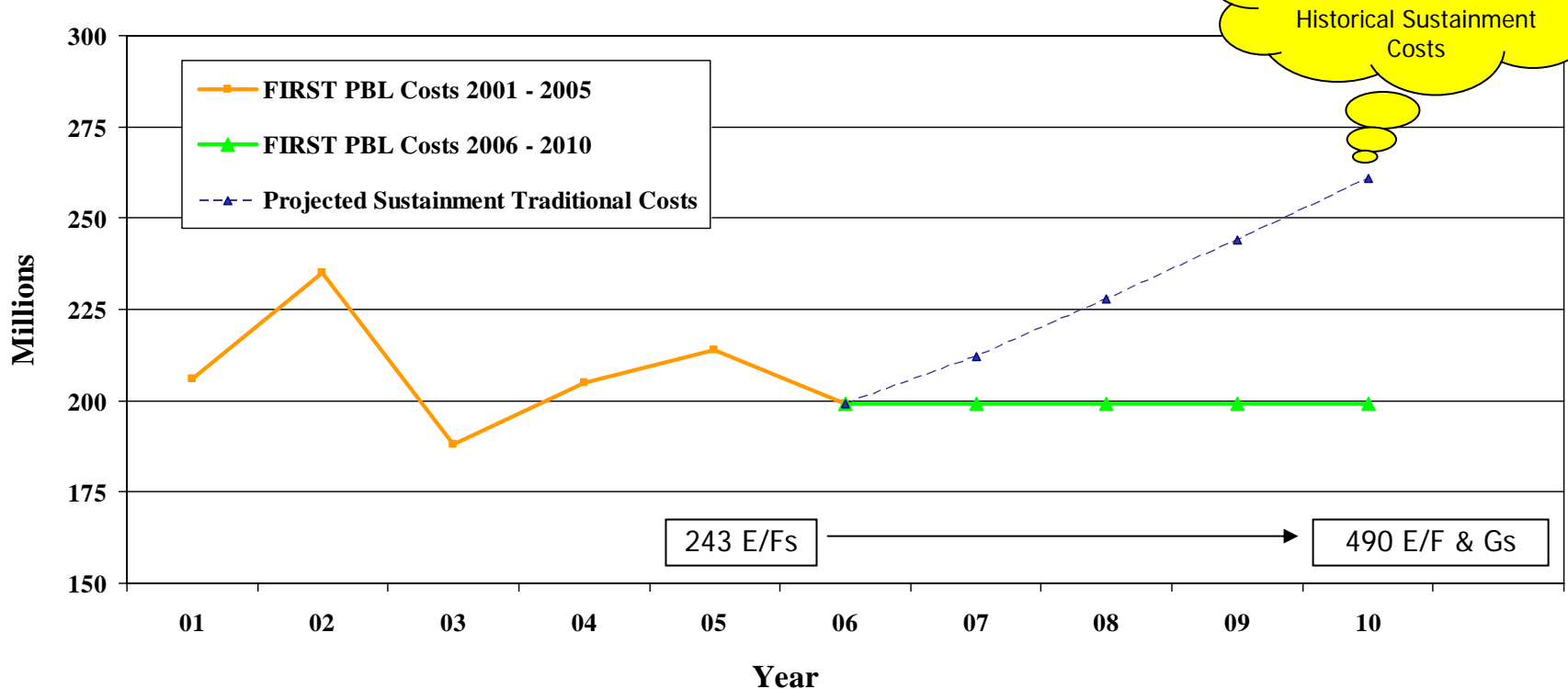
BACKUP



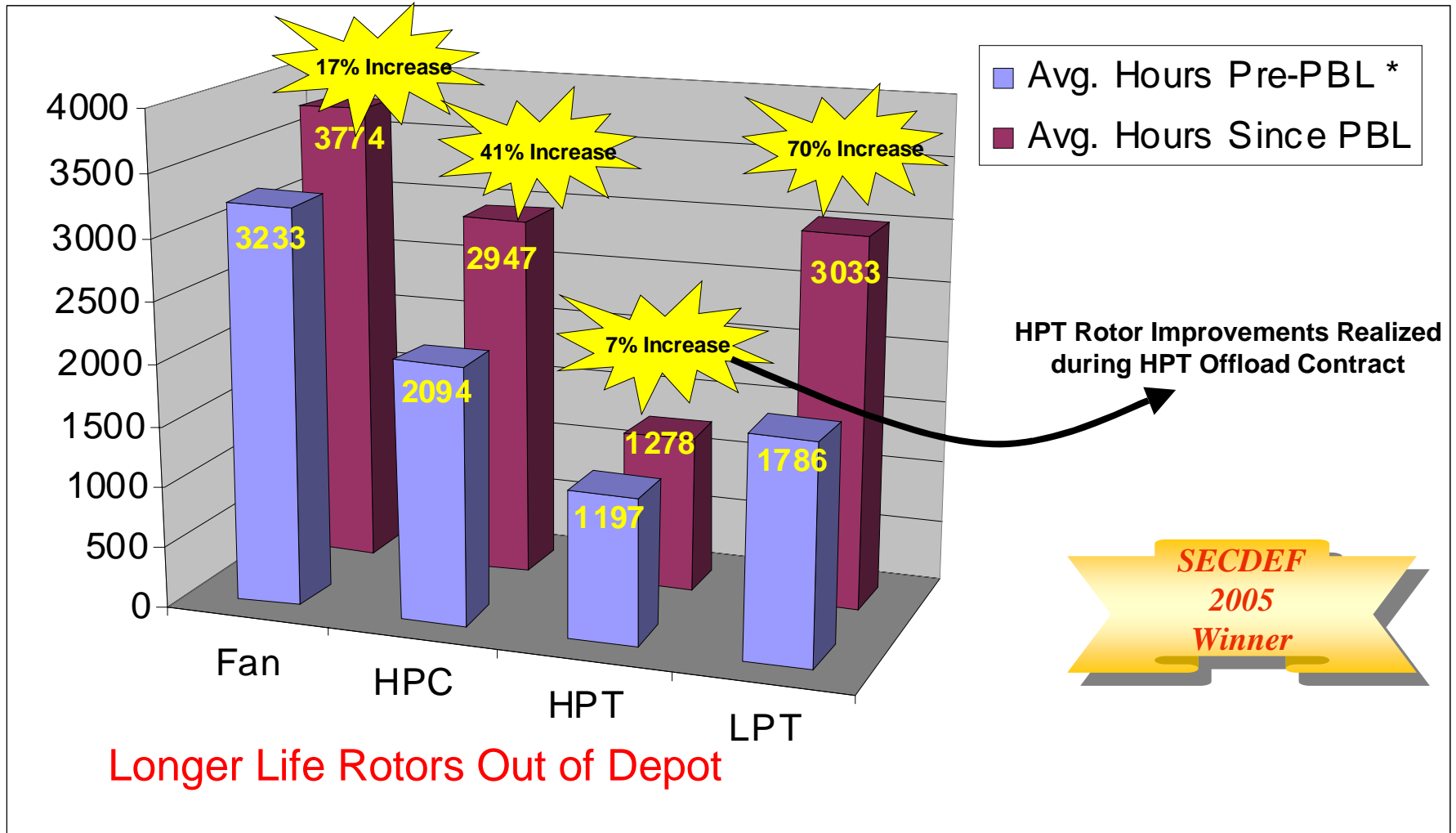
FIRST vs. Traditional Sustainment

➤ Under A Traditional (Non-PBL) Support Scenario, The Cost Of F/A-18 E/F Spares & Repairs Was Projected To Increase At An Annual Rate Of 7% (Based On F/A-18 C/D Historical Spares And Repairs Costs)

➤ First Stabilizes The Cost Of F/A-18 E/F Spares & Repairs



F404 PBL TOW Entitlement Improvements Best Builds Using Supermarket Concept



We Need Better Data!!



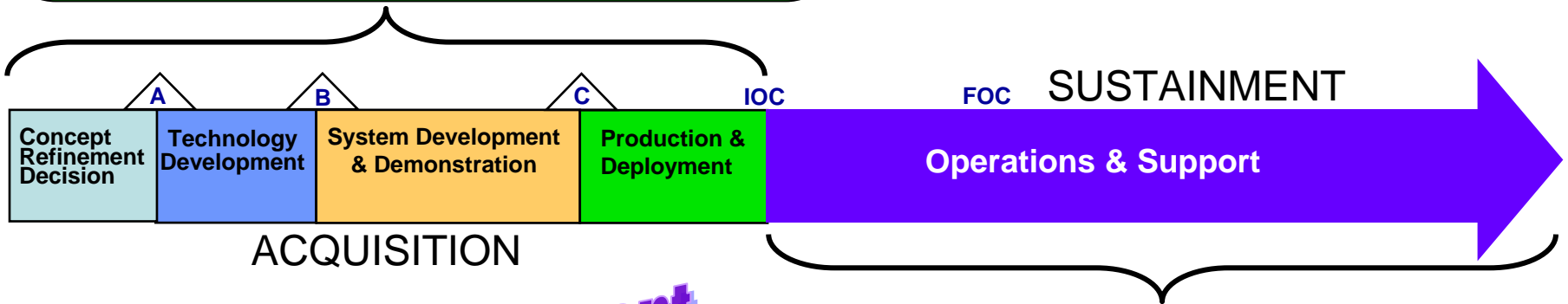
- Create a comprehensive PBL reference Data Base
 - DoD PBL Toolkit (hosted by DAU) is excellent, but lacks comprehensive ‘across the board’ PBL program info
 - Need DoD-wide effort to capture and organize
 - PBL details, contract types, metrics, etc
 - To ensure full repository of best practices
 - To advertise Performance-Based successes
 - To respond to GAO, Congress, DODIG, etc.



TLCISM – Policy vs. Reality

- PM has clear accountability and authority
 - Management & Oversight
 - Chain of Command
 - Funding
 - Support Functions/Organizations
 - Schedule

Is the PM really the TLCISM?



Is it a lack of enforcement, or a mismatch between policy and reality?

- PM authority/accountability very 'loose'
 - Does not receive or control funding
 - Not in Support Chain of command
 - Do not control Support organizations
 - In 'System of Systems': multiple PMs
 - Relationship between PM and support often nebulous

Performance-based Logistics Successes

Boeing / Parker C-17 PBL

- Parker is responsible for availability of Parker C-17 BOM at the Boeing Atlanta warehouse
 - Repair of failed items
 - Replenishment of condemned items
 - Additional spares as fleet grows
 - Obsolescence & DMS responsibility
- Parker is paid by the flight hour
 - positive incentive for “above the line” performance
 - negative incentive for “below the line” performance
- The support chain operates as a “pull” system (Lean)
 - Kanban of RFI parts at Parker supports the Atlanta warehouse Kanban, that in-turn supports base supply
- Parker is incentivized for reliability improvement

Performance-based Logistics Successes

Boeing / Parker C-17 PBL (cont'd)

- The real strength is the alignment of goals:
 - Boeing metric with USAF is 86% Fill Rate
 - Parker metric with Boeing is 86% Fill Rate
 - Prior “business as usual” metric was 45 day turnaround time
- Issues in execution
 - Unauthorized changes to wholesale / retail allocations
 - Items from wholesale added to WRSP kits without placing a spares order, wholesale side can be shorted
 - Short-time “borrowing” for deployments
 - Changes in use and operation of C-17 aircraft
 - Timely and accurate information
 - Lack of integration of information systems
- Boeing, USAF, and Parker are pleased with the results

Performance-based Logistics Successes

Boeing / Parker F/A-18EF "FIRST"

- Contract with Boeing for availability of parts and technical assistance in support of NADEP North Island for F/A-18 E/F unique components
 - Three way "partnership"
 - Parker forecasts and provisions parts
 - Pull system with Boeing Torrance warehouse
 - Spares for fleet standup
- Parker provides engineering liaison services to the Depot, covering processes, training, etc.

Performance-based Logistics Successes

Boeing / Parker F/A-18EF “FIRST” (Cont’d)

- Parker is paid a monthly fee based upon flight hours with incentives for
 - Availability
 - Supplier response time
 - Technical support rating
- Boeing, NADEP NI, and Parker are pleased with the results

Performance-based Logistics Successes

Lessons Learned

- Trust is paramount
 - Doesn't happen automatically
 - All parties have to share data
 - Mutual desire of parties for both to be successful
- Old paradigms have to be challenged in order to maximize results
 - Mass logistics vs. lean (just-in-case vs. just-in-time)
 - Warehouses and safety stock (vs. virtual warehouses)
 - “We can do it better than you can” (all parties)
- Fear and opportunity must be recognized
 - Jobs and change (people must adapt to new environment)
 - Industry must be willing to step up to higher risk
 - Fear that industry won't be there for the long-term

Performance-based Logistics Successes

Lessons Learned (cont.)

- Education is part of the process
 - PBL not well understood by both industry and Government
 - Business case process not well understood; wrong comparisons
 - Adds to the time to get to contract
- Must be flexible and work issues jointly
 - Top management understanding and commitment (all parties)
 - Learn from mistakes
 - Adjust and adapt
- Perseverance is essential (Don't give up!)

Performance-based Logistics Successes

PBL drives the right behavior

"Good ideas are not adopted automatically. They must be driven into practice with courageous patience."

— Adm Hyman Rickover