Performance-Based Logistics: Buying Performance, Not Parts

March 28, 2006

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DoD would be like Wal-Mart . . .

DoD Logistics is Big Business

Annual Budget:
- **$42 billion in supply**
- **$68 billion in maintenance**
- **$10 billion in transportation**
- **$120 billion total logistics costs**
- **(FY 05 President's Budget)**

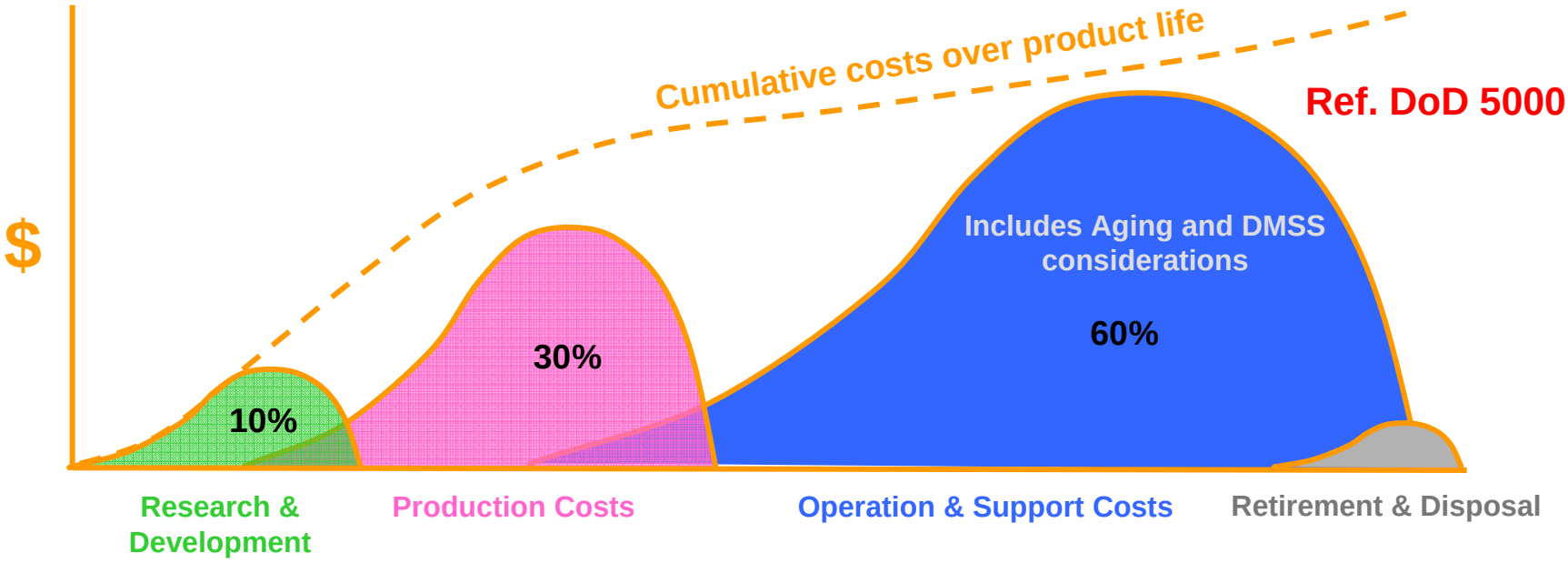
Operational Resources
- **51,000 vendors**
- **2000+ legacy logistics systems**
- **45,000+ requisitions per day**
- **$77 billion inventory**

$700 billion in assets:
- **300 ships**
- **15,000 aircraft**
- **30,000 combat vehicles**
- **900 strategic missiles**
- **330,000 ground vehicles**

It's a complex enterprise, and a central challenge is delivering cost effective operational availability.

Total Ownership Cost

An estimated 60% of costs are in post delivery operations and support costs.



DoD Defintion of TOC:

Sum of all resources necessary to organize, equip, sustain and operate military forces, including:

- Cost to research, develop, acquire, own, operate, and dispose of systems
- Cost of other equipment and real property
- Cost to recruit, retain, separate and otherwise support personnel
- All other costs of business operations

DoD Guidance: PBL

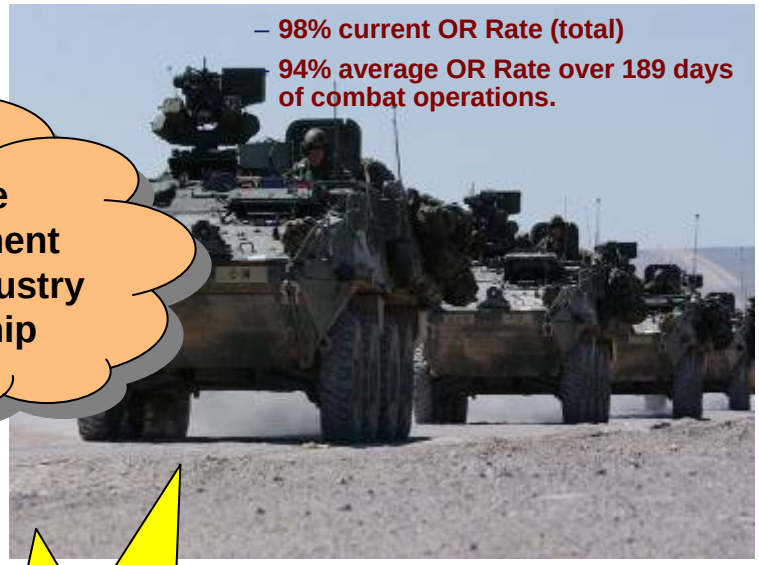
"PMs shall develop and implement *performance-based logistics* strategies that optimize total system availability while minimizing cost and logistics footprint."

"PBL is the purchase of support as an integrated, affordable, performance package designed to optimize system readiness and meet performance goals for a weapon system through long-term support arrangements with clear lines of authority and responsibility."

"One of the most critical elements of a PBL strategy
is the **tailoring of metrics** to the operational role
of the system, and ensuring
synchronization of the metrics
with the scope of responsibility of the support provider."

Performance-Based Logistics

- Life Cycle Management
- Gov't/Industry partnership



Program	Pre-PBL	Post-PBL
F-14 LANTIRN	56.9 Days	5 Days
ARC-210	22.8 Days	5 Days
H-60 Avionics	52.7 Days	8 Days
F/A-18 Stores Mgmt System	42.6 Days	2 Days CONUS 7 Days OCONUS
APU	35 Days	5 Days

Decreased Response Time 70%-80%

- Focused on warfighter needs
- Buying outcomes (not inventory)
- Aligning incentives to outcomes

C-17 Globemaster Sustainment Partnership

- Performance-based contract between AF and Boeing
- Requires contractor to provide continuously increasing levels of sustainment support
- Includes both item management and depot-level repair
- $4.9B FY04 through FY08

Questions for the Supply Chain Practitioner

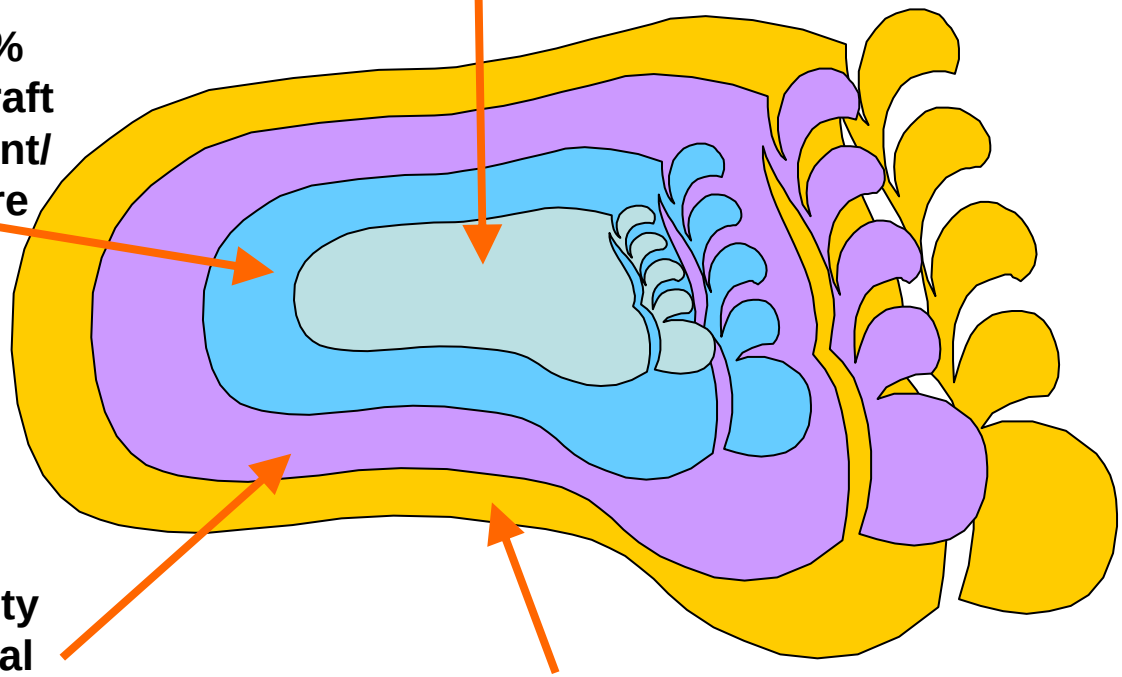
- **What is the Scope of my PBL Strategy?**
- **What does that mean the scope of my Supply Chain is?**
- **What are the metrics that will drive alignment of the supply against that scope?**

PBL requires a fundamental examination across all elements of the SCOR model . . .
Plan, Source, Make, Deliver, and return.

Buying Performance Outcomes, Not Individual Parts & Repair Actions

The Performance Outcome:
12 Mission Ready Aircraft

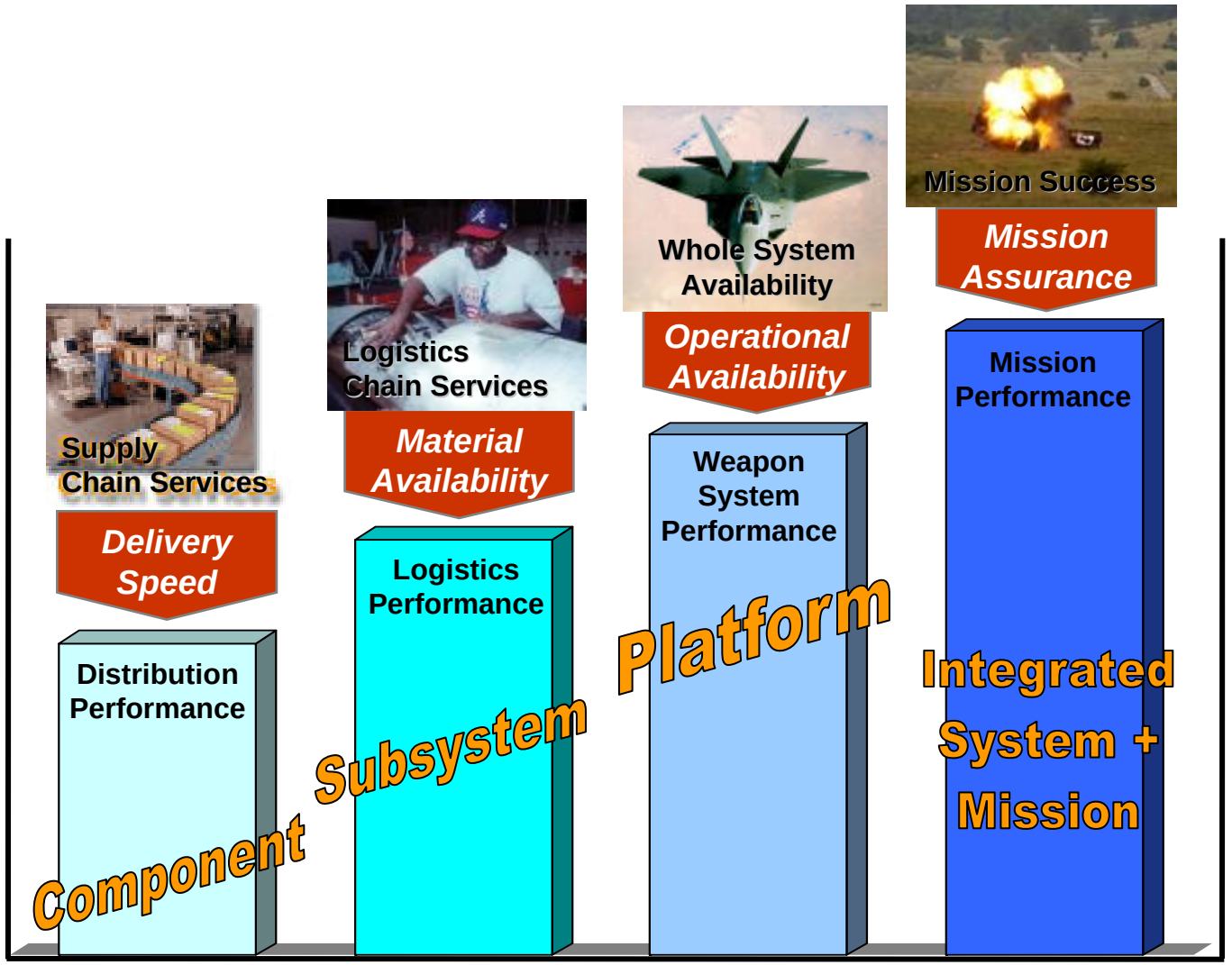
To Maintain an Operational Availability of 75% Requires 16 Aircraft And the Equipment/ Material for 4 More Aircraft



A Reduction in Predicted Reliability Requires Additional Maintenance Personnel To Maintain Same Level of Readiness

Increased Stocks Require Additional Force Protection Personnel and Fuel, Water and Subsistence to Support the Entire Force

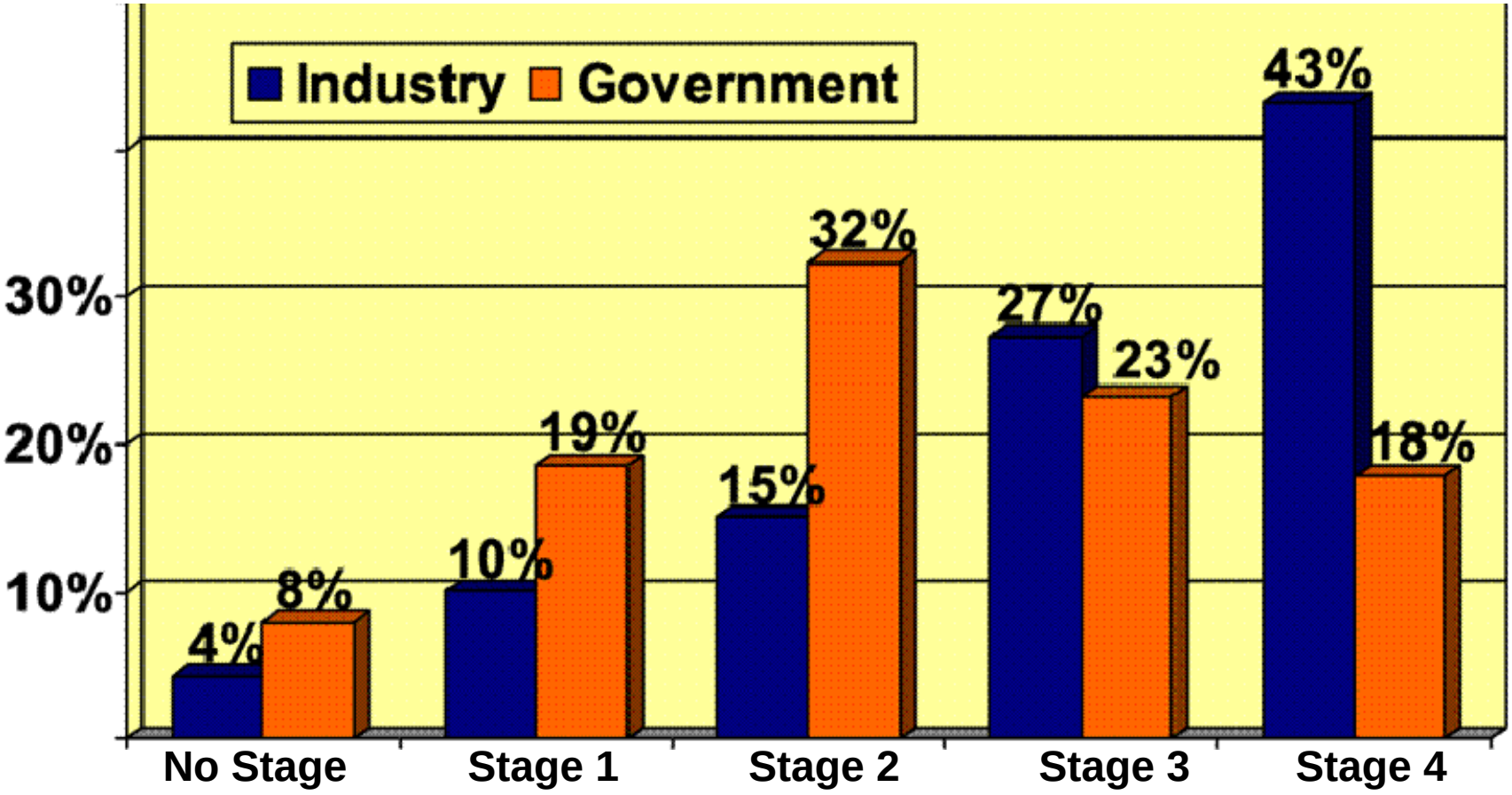
PBL Maturity Model



Scope of PBL Strategies

PBL Implementation Challenges

Government and Contractors are not in agreement with regards to what is the right stage for PBLs….and within the Government there is not agreement.

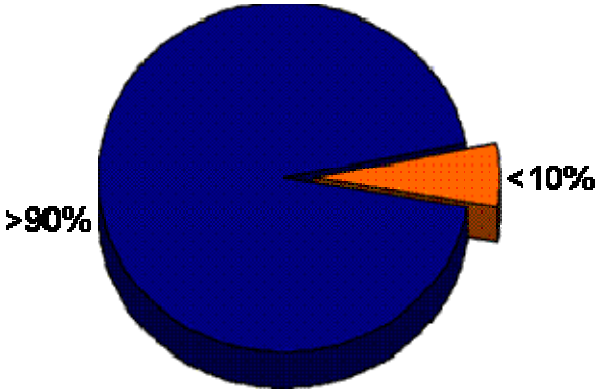


Source: 2005 PRTM Benchmarking Study of PBL Contractors. Participants of a PRTM Benchmarking Study sponsored by the DoD were asked to describe both their and the gov'ts ideal mix of PBL contracts.

THE UNIVERSITY of TENNESSEE
College of Business Administration

PBL Implementation Challenges

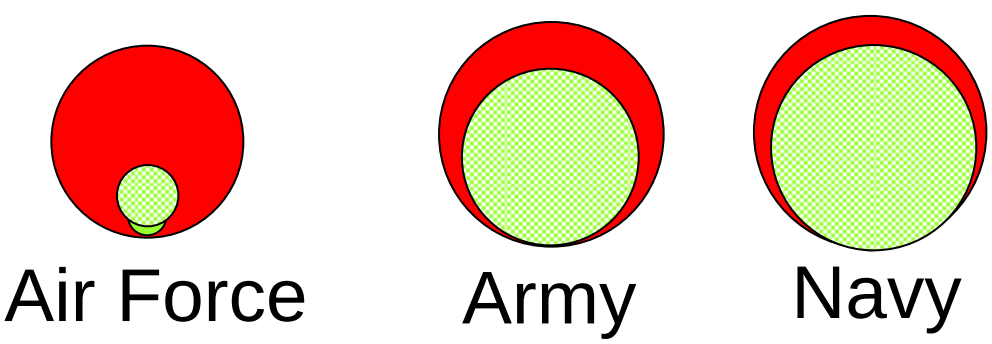
Less than 10% of Inventory is owned by Suppliers in current PBL agreements. As such, industry has little reason to improve reliability when they can buy it with "free" inventory.

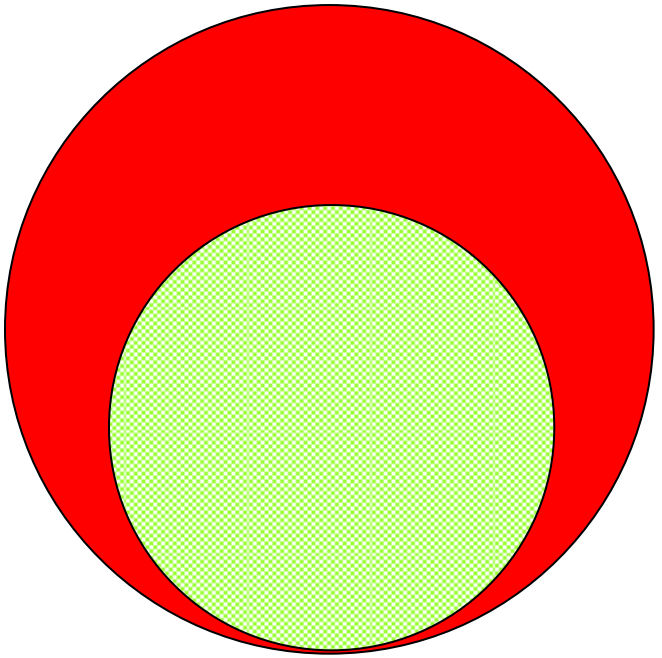


Weapons System Performance Levers	Supplier-Owned		Gov't-Owned	
	Cost to Supplier	Perf. Impact	Cost to Supplier	Perf. Impact
Increase inventory investment	$ - $$		n/a	
Invest in reliability improvement	$$$		$$$	
Decrease repair cycle time	$$		$$	

Source: 2005 PRTM Benchmarking Study of PBL Contractors

PBL is the Future



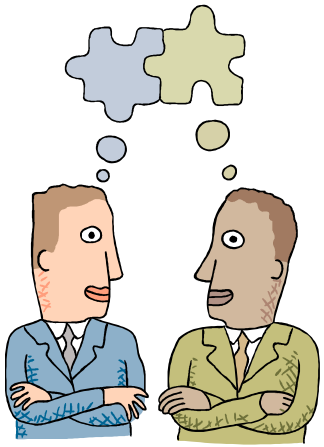


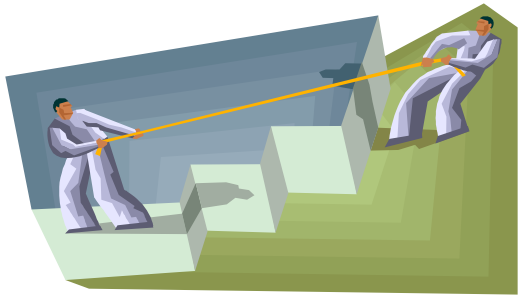
All Dept's

ACAT I & II Programs
Fall 2005
PBL & Non PBL vs.
Non PBL Programs

PBL rollout is still early . . .
but the coming years will see widespread adoption

PBL Evolution





Concept → Policy → Application → Challenges

F-117	Product Support Reengineering Report to Congress	DoD QDR mandates "PBL"	DoD 5000 policy updated: PBL is "preferred" Support Strategy	Over 200 current or planned PBL programs	JSF, F-22, and many others
1998		**2001**	**2003**	**2004**	**2005>**

An Industry Perspective on Performance Based Logistics And Supply Chain

28 March 2006

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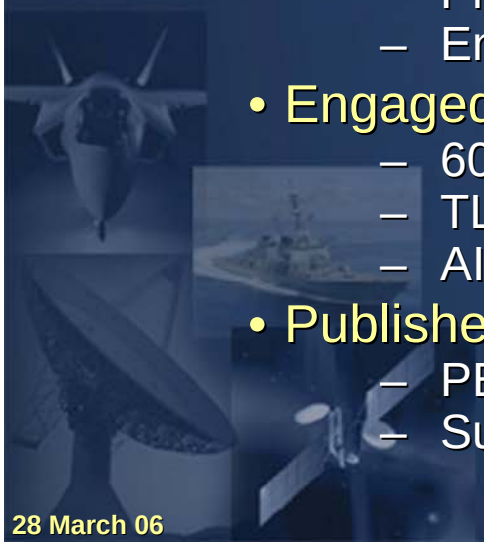
Lockheed Martin
Enterprise Logistics Business Office

DoD is Driving PBL Implementation

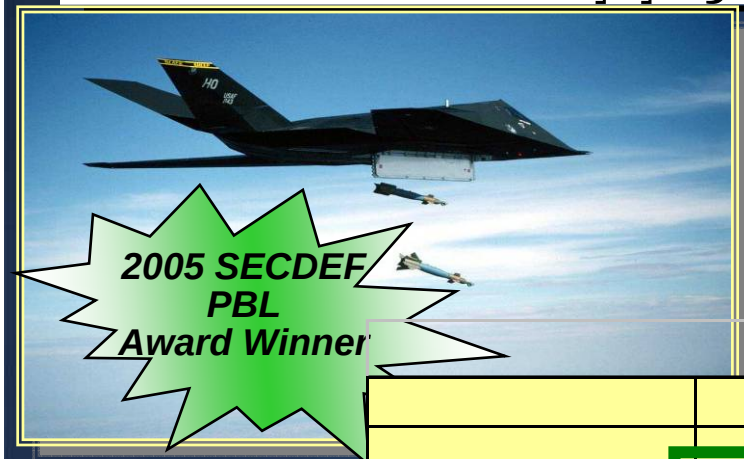
- Significantly restructured JROC instruction to emphasize
  - Sustainability
  - Maintainability
  - Mobility
- Significantly restructured 5000 Series
  - TLCSM
  - PBL is preferred sustainment strategy
  - Issued supporting Sustainment Framework
- Converted or started 120 PBL programs (through FY04)
  - Documented $15B in savings over FY 05 FYDP
- Reengineered DAU curriculum
  - Life Cycle Logistics
  - Program Management
  - Engineering
- Engaged in program assistance/oversight
  - 60 MDAPS
  - TLCSM Executive Council
  - AIA Tiger Team
- Published enabling guidance
  - PBL Guide
  - Supportability Guide



LM PBLs Supporting our Warfighters

Supply Chain Management Drives PBL!

F-117 TSSP Supply Metrics



100% performance goals met for each contract year

	12 Month Moving Averages						
PERFORMANCE AREAS	NMCS	MICAP	RSP	Depot Quality	Depot Delivery	Delinquent DRs	WST Availability
Standard	5%	72 Hrs	96%	0-20	0 Days	1	99%
FY 97 (9 months)	4.0	61.7	98.7	20	N/A	0.1	99.81
FY 98	6.0	63.3	99.2	20	1.8	0.0	99.80
FY 99	2.6	36.8	98.9	20	0.0	0.0	99.77
FY 00	2.8	36.7	99.4	20	0.0	0.0	99.38
FY 01	2.2	30.3	99.2	20	0.0	0.0	99.44
FY 02	2.2	27.1	99.5	20	0.0	0.0	99.97
FY 03	1.4	18.8	99.3	20	0.0	0.0	99.97
FY 04	4.0	22.6	98.6	20	0.0	0.0	99.90

TSSP

"The growth in operating cost for the F-117 over the last five years has been miniscule compared to increases for other similar aircraft. Whatever the folks at Holloman are doing….should be the envy of the Air Force." - OMB, Oct 2001

HIMARS/M270A1 LCCS

- LCCS System Status Readiness >92%
- Support 24/7 Anywhere In The World
- Mission Capable (MICAP) Deliveries
  - < 24 hours Average CONUS
  - < 96 hours Average OCONUS
- Repair Turn-around Time
  - < 5 days Average for LRU Field Repairs
  - < 45 days Average for LRU Depot Repairs

Lockheed Martin is Exceeding Requirements in All Categories

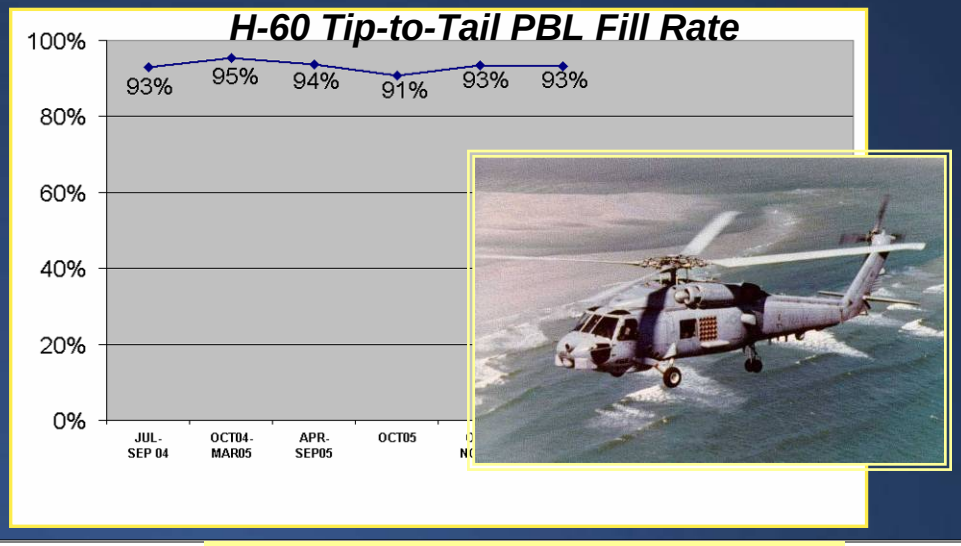
Javelin

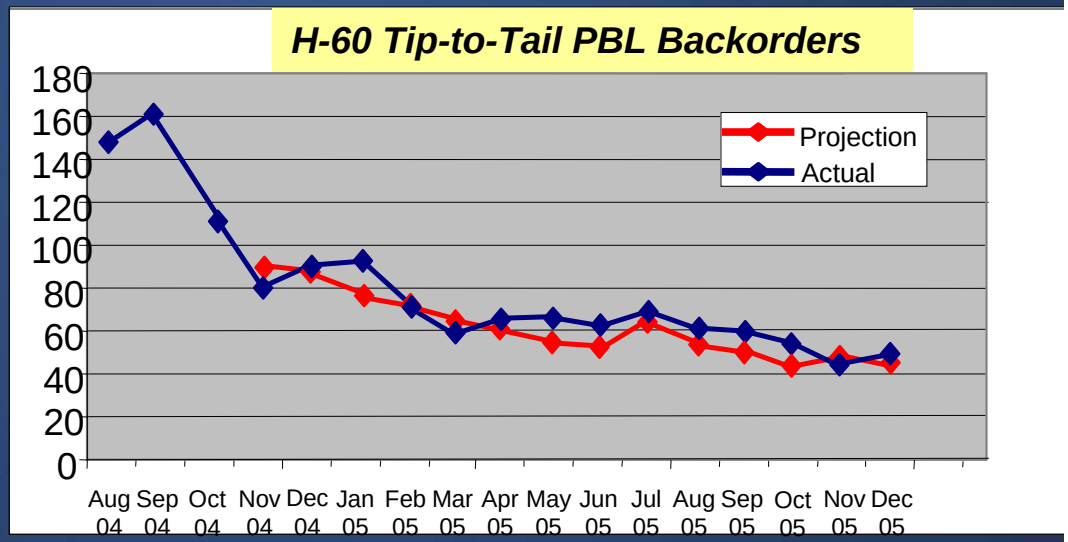
- 10 Year FFP PBL Supporting US Army, STRICOM, USMC & FMS
- Design to Operational Support Cost Analysis (DTOSC)
  - Government audit validated a savings of 62% over the life of system
- Maintain > 90% OR rate for Tactical System (CLU)
- 10-Calendar Day TAT for Training Devices-Worldwide
- Go-to-War Support

We are Operating Well Within the Performance Criteria

H-60 Tip-to-Tail

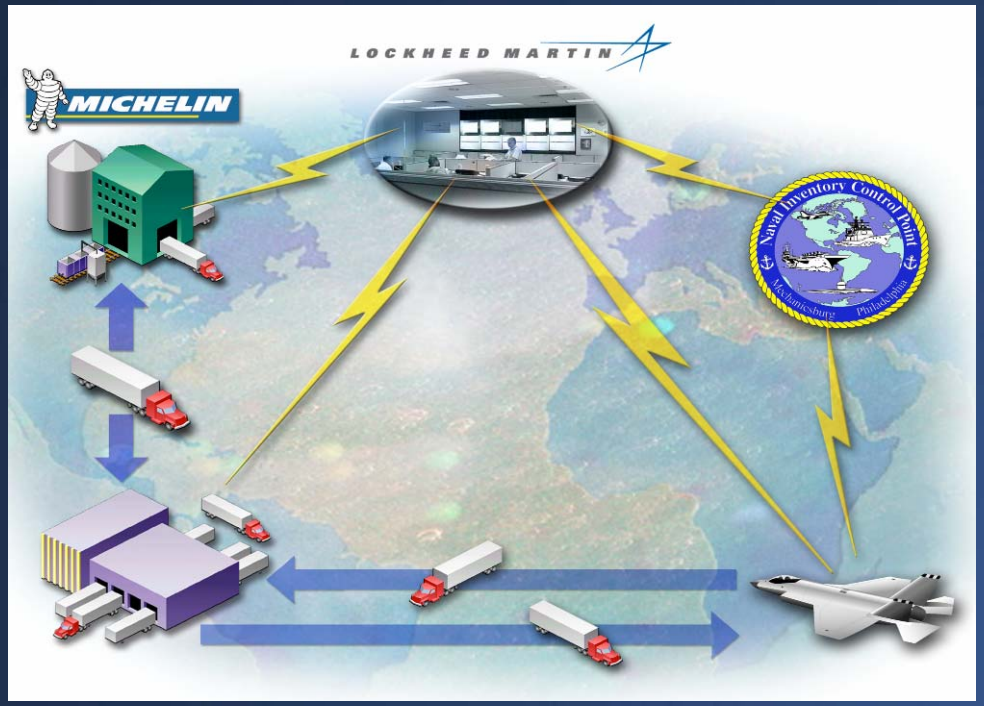
- **Fixed price per flight hour**
- **Wholesale supply support for legacy H-60s**
  - Repairs, replenishment spares, obsolescence mgmt, inventory mgmt, requisition processing, transportation
  - H-60 unique, NAVICP managed items - Including FMS and USCG
  - Phase 1 - 540 WRAs, SRAs
  - Phase 2 will add over 680 NIINs
- **Fleet maintenance & supply procedures do not change**
- **Performance to date:**
  - Logistics response time down from 52.7 to 6.7 days

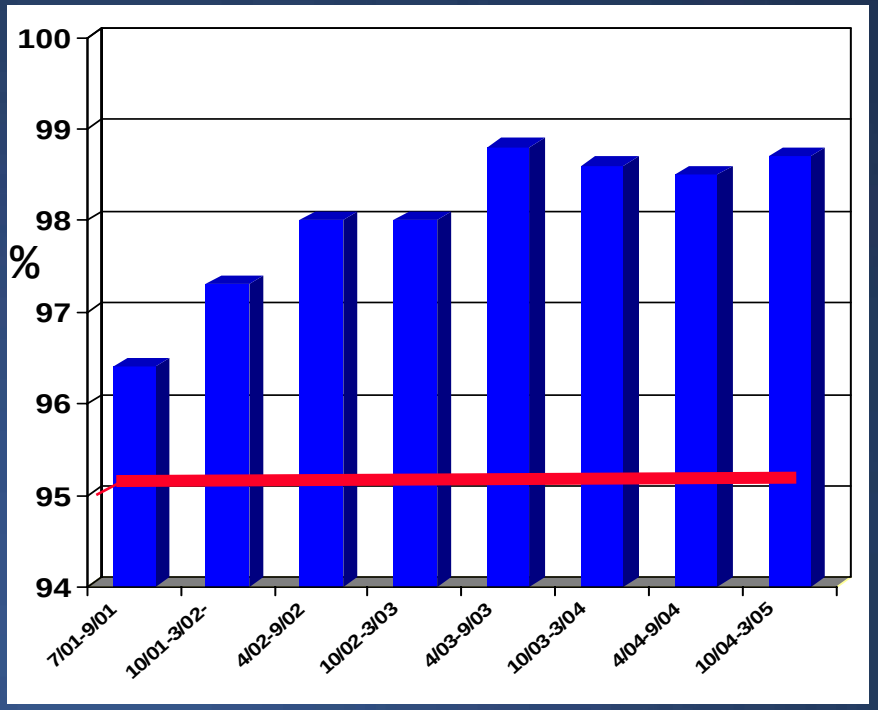




Effective Partnership – LM, Sikorsky Aircraft, 12 OEMs and NADEPS NI & JAX

Naval Aircraft Tires Supply Chain





- Wholesale & Retail inventory levels dropping
- Record:
  - Not one backorder (100% fill rate)
  - ACWT CONUS: 32 hrs 53 mins
  - ACWT OCONUS: 58 hrs 31 mins

- Goal is 95% on time
  - 48 hrs CONUS
  - 96 hrs OCONUS
- Taking cost out: $46M savings

Delivering to meet US Navy World Wide Requirements

Industrial Prime Vendor

- Indefinite Quantity Contract providing over 50,000 different parts at the three Air Force depots
- Total contract value estimated at $750M over 10 years
- Provides for rapid fulfillment of critical depot maintenance materials
- Utilizes both commercial subcontractors and DLA as sources for materials
- Provides replenishment materials for DLA worldwide demand on select items

Proven Best Practices Deployed to Decrease DLA and USAF Cost

New Programs are Strongly Moving to PBL

VH-71

Supply Chain Management Will Drive Them Also!

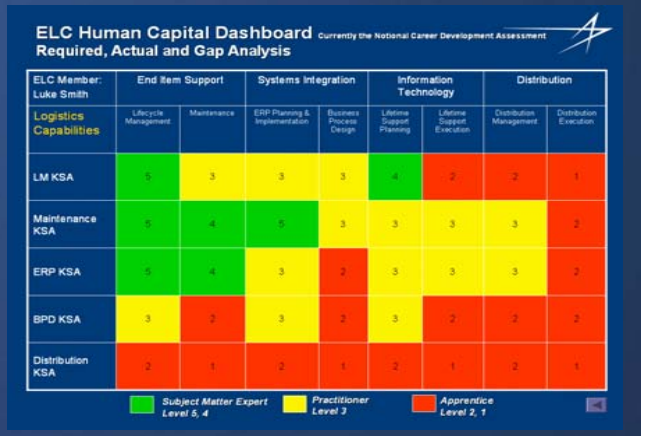
Lockheed Martin is Investing in PBL

- Optimizing Logistics Technology Investment

- Common World-Class Processes

- Strategic Private & Public Partnerships

- Professional Sustainment Knowledge is Being Institutionalized Throughout LM



Creating a Powerful Value Proposition for the Government

Real World Challenges for PBL/SCM

- **Getting on Contract**
  - Timeline for getting on contract still very long
- **Risk Management**
  - New programs require a phase-in period when system performance is not a known quantity
- **Cost Visibility**
  - Creates a more activity-based-cost environment that can increase visibility of actual total costs
- **Scope of requirements/control**
  - Normal difficulties associated with changing roles/responsibilities of large organizations
- **Funding Flexibility**
  - Balancing customer need for “real-time” funding/performance level variation vs contractors’ need for business base stability

In Closing

- PBL is successfully sustaining many of our products to improve availability and reduce cost
- We believe that PBL is the right answer for our new systems
- We are working with our customers to evaluate PBL applicability to legacy platforms
- SCM is a driving element of PBL, but certainly not the only one
- PBL/SCM require on-going innovation to continuously drive down costs, improve availability for our customers

"We never forget who we're working for" ™

OTHER QUESTIONS?

Performance-Based Logistics: Buying Performance, Not Parts

March 28, 2006

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