



# Positioning Your Company for Defense Department Work

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**Helping Remanufacturer's of Service Parts Capture A  
Highly Profitable New Source of Revenue Through  
Performance Based Logistics (PBL)**

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# Performance Based Logistics (PBL)

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Definition:

- PBL is a strategy for supporting weapons system through the acquisition of an integrated performance package designed to optimize system readiness



# Commercial Antecedent to PBL

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- PBL has been in use by Commercial Industry for over 20 years and represents and “Industry Best Practice.”
- Aircraft Industry has led the way with concepts such as Power-by-the-hour (unit of output)
  - GE – Jet Engines
  - Pratt Whitney – Jet Engines
  - Rolls Royce – Jet Engines
  - Honeywell – Jet Engines & Auxiliary Power Units
  - Rockwell Collins – Avionics



# Why PBL Now?

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- Aging weapons systems
  - Design life – 40 years including rebuilds/upgrades
  - Active service life – 60 to 90 years
  - Must make do with legacy systems until next generation weapons are complete
  - Need legacy weapons system to have indefinite service life
  - Need strategy that counteracts the negative effects of aging on lifecycle cost
  - Need to improve the reliability of systems to meet the accelerating demands of the battle area
  - Need to reduce obsolescence and the effects of Diminishing Manufacturing Sources



# Why PBL Now?

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- Skipped a generation of new weapons systems. New systems more expensive and complex
  - Development cycle is long 8 – 10 years
  - Production and delivery adds another 10 years
  - May be obsolete before systems delivered
  - Must rely on improved legacy systems until new systems are available
- Need to significantly reduce support costs for aging systems to afford their replacements
  - Counter-intuitive given the need to extend service life of weapons systems and corresponding lifecycle cost growth from aging
  - Funding shortfalls, the deficit, the tax cuts. Where is the money going to come from to support weapons systems modernization?
  - Need a new support strategy that leverages logistics expenditures



# PBL versus Traditional Logistics Support

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## **Traditional Logistics**

- Program Managers (PMs) purchased the components of support
- PMs served as the integrator
- PMs were responsible for mitigating all performance risk
- Process yielded thousands of financial transactions
- Did not provide incentives for OEMs and other suppliers to improve the product
- Support was only as good as the PMs contract specified
- Not focused specifically on meeting war-fighter needs

## **PBL**

- Focuses on meeting war-fighter defined goals
- Shifts integration responsibility from the PM to PBL Supplier
- Forms partnership between the war-fighter, the PM and PBL supplier
- Shares risks and rewards with the supplier
- Incentives to continuously reduce the logistics footprint, improve reliability, and optimize the supply chain
- Uses war-fighter defined performance metrics to manage the supplier
- Simplifies financial transactions using pay-per-unit of output or pay-per-period



# DoD Goals For PBL

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- Create a lean resource investment to support a weapons system's lifetime maintenance and modifications requirements
- Reduce the lifetime resources expended in maintaining and modifying a weapons systems
- Improve the readiness of a weapons system



# No Typical PBL offering

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- Each PBL offering is uniquely crafted
- Availability/Performance Metric and evaluation approach negotiated with the War-fighter
  - Weapons systems availability
  - Component availability
  - Supply availability
- Include bundled services that will allow achievement of the performance metric. These services may include:
  - Management of wholesale and retail supply chains
  - Evacuation of impaired assets
  - Weapons Systems Maintenance including Depot remanufacturing
  - On-Site Field Technical Support both CONUS and OCONUS in peace and war
  - Technical Documentation
  - Engineering





# No Typical PBL offering

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- Contractor ownership of inventory is implied
  - “How much” is based on the supplier’s sensitivity to risk
  - Government desire to divest inventory
- Partnering required between war fighter, PM, and PBL support contractor
- PBL offering must adhere to all Title 10 requirements
- Payment method may vary from pay-per-unit of output, pay-per-period at a fixed rate per system supported, or hybrid payment terms



# Products subject to PBL consideration

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- ACAT I, II legacy weapons systems
- All new acquisition programs
- High value, long lived, repairable components

*Initiative under way in all services (USA, USAF, USMC, USN)*



# PBL Authority

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- Quadrennial Defense Review (Sep. 2001)  
*"DoD will implement Performance Based Logistics to compress the supply chain and improve readiness for major weapons systems."*
- Undersecretary of Defense, Acquisition, Technology & Logistics, Feb 13, 2002  
*Requires PBL plan from each Program Manager for all new acquisition programs and all ACAT I and II Fielded Systems*



# A Long Gestation Period

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- Since PBL Guidance has been provided only a handful of Performance Based Agreements have been awarded
- Over the next 2 to 5 years, hundreds of weapons systems will be evaluated for PBL applicability
  - 50 New Weapons Systems are being designed with PBL as the preferred support option
    - DDX
    - OFW
    - FCS
    - JSF
  - ACAT I and II legacy systems will undergo evaluation over the next 2 to 5 years



# Focus on Systems Availability

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## Early PBL Successes

- F/A-18 Hornet - Boeing
  - Starting availability – 65%
  - Current availability – 98%
- F-14 Tomcat – Northrop Grumman
  - Starting availability – 73%
  - Current availability – 90+%
- H-60 Black Hawk - Sikorsky
  - Starting availability – 71%
  - Current availability – 85%



# Who can provide PBL services?

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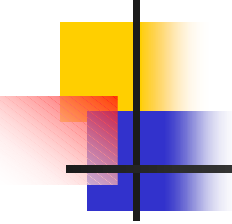
- Prime Contractors/OEMs
  - Highly preferred
- Second Tier Component Suppliers
  - Highly Preferred
- Government Organizations
  - Least preferred, however, DoD encourages partnering with DoD maintenance and support organizations to leverage their significant investment in depots, shipyards, and logistics bases



# PBL, DoD's preferred support alternative

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- Proven higher levels of systems availability
- Reduces government investment in product improvements
- Encourages supplier investment in product improvements that are incrementally implemented during maintenance cycles and support operations
- Takes advantage of industry expertise in supply chain optimization to reduce inventory investment and logistics footprint
- Simplifies management by eliminating the high volume of administrative and financial transactions associated with traditional support techniques
- Rewards the contractor for the results delivered rather than for the specific products or services delivered
- Results in continuous improvement of the support process by the contractor
- Allows redundant infrastructure to be retired



# Why should you be interested in providing PBL solutions?

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- Long term contractual arrangement
  - Typical PBL contract is for a 5 year base period with 5 option years based upon achievement of availability metrics
  - Contract stability because revenue is predicated on the installed base of equipment rather than production schedules
  - High likelihood of renewal without competition if performance targets are met or exceeded
- Higher margins through risk sharing
  - PBL solutions may generate between 12 and 25% profits before tax
  - Margins increase as reliability improves, inventory is optimized and repair costs are avoided
  - You get rewarded for doing “right” things for the systems
- Long term partnership with your customer
  - Blocks out competitors





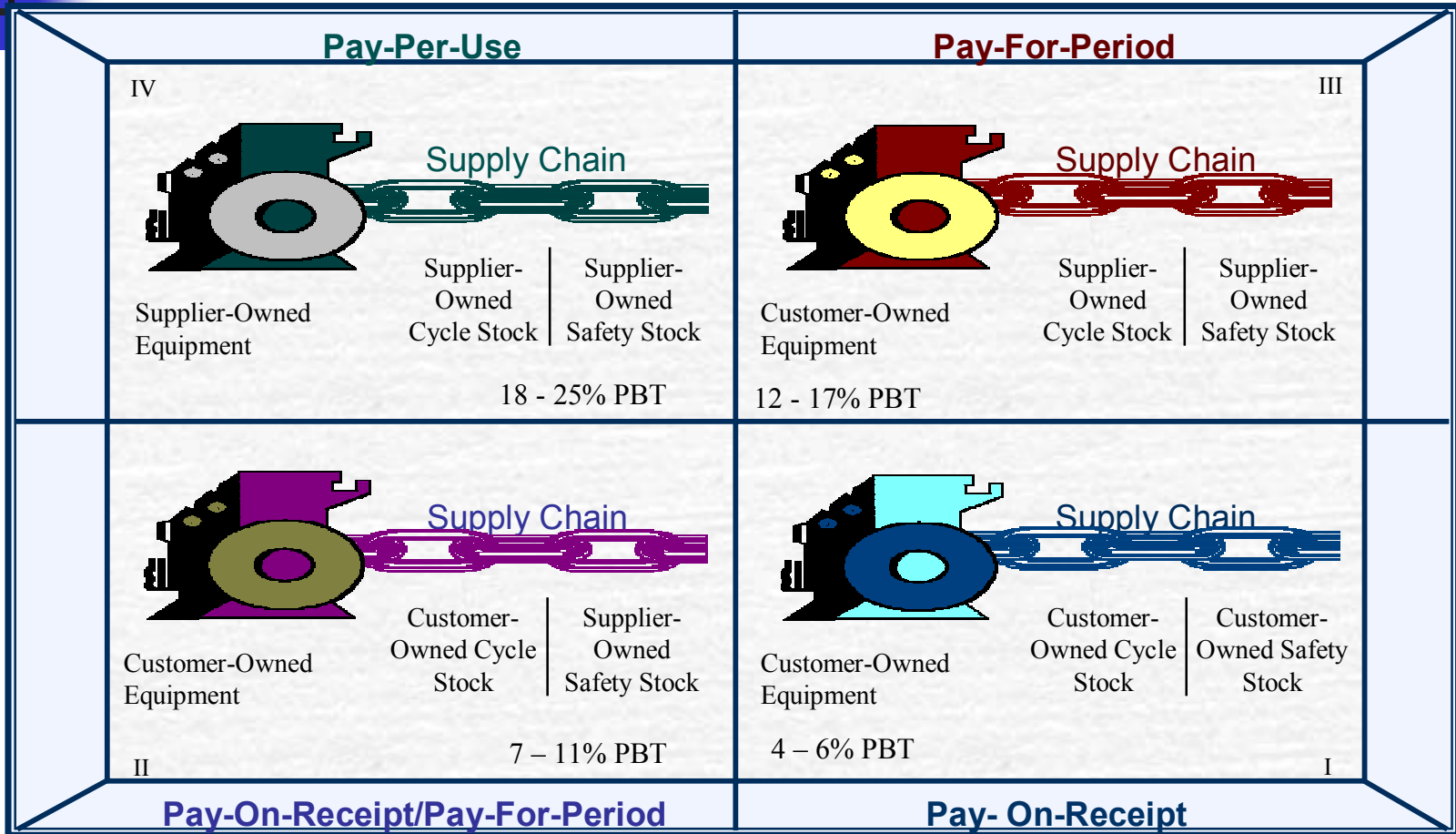
# Indications of Size of Market for PBL offerings

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- \$50 Billion per year in new weapons systems appropriations
- Depot expenditures for depot level maintenance from all services is around \$10 Billion per year

# PBL Profit Potential

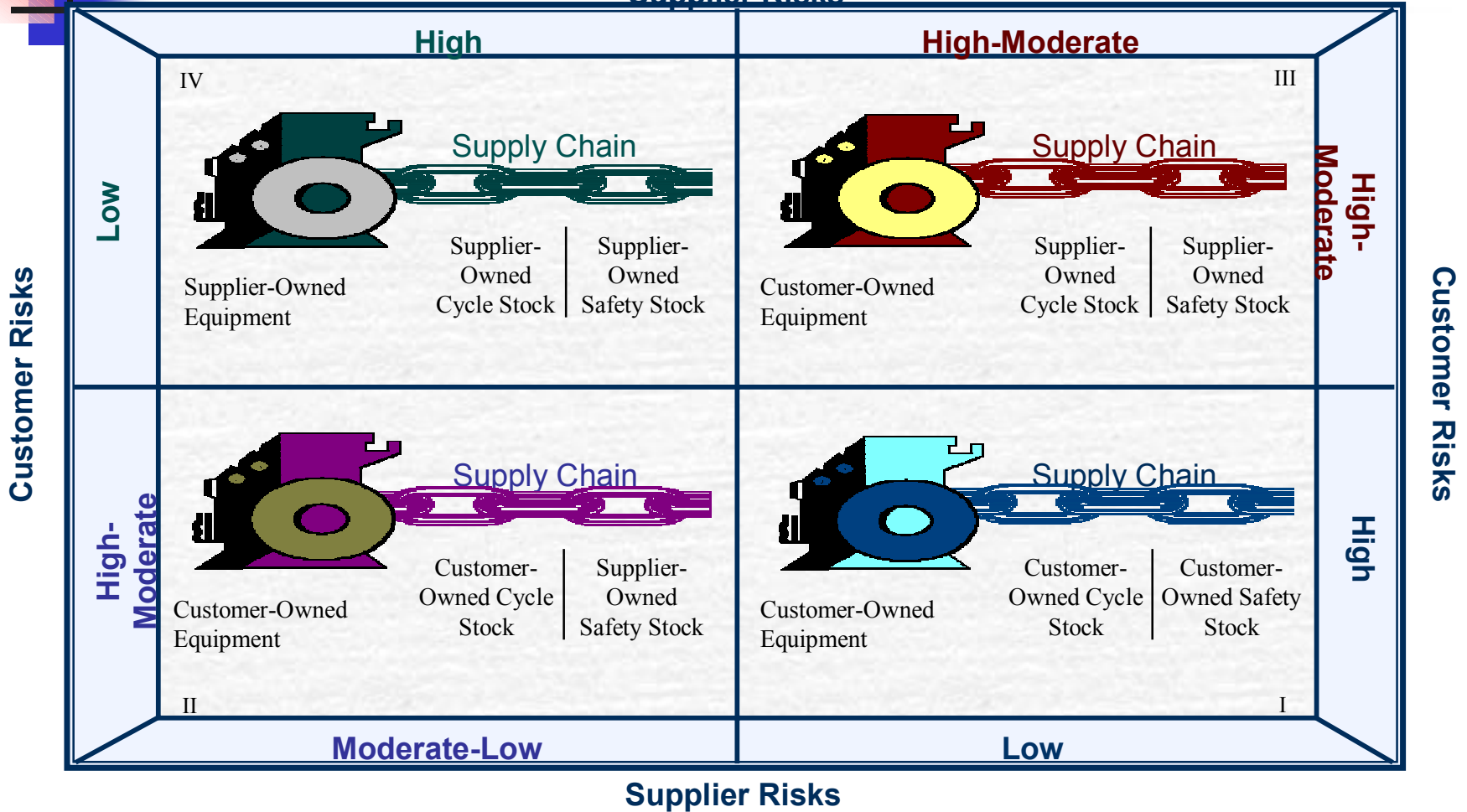
## Supplier Revenue Recognition



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# Customer/Supplier Risk Relationship

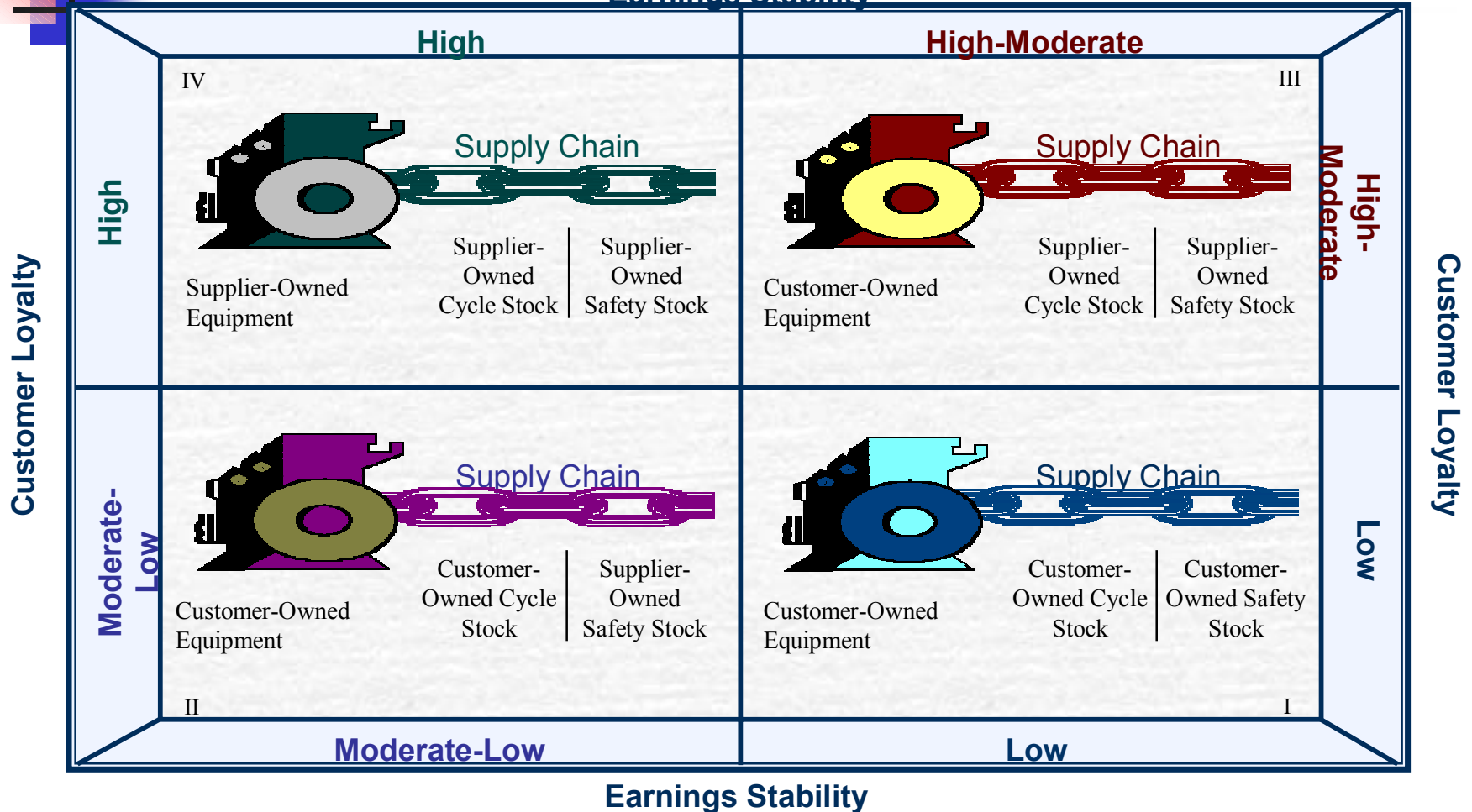
Supplier Risks



# PBL Earnings Stability

## Stability/Customer Loyalty

Earnings Stability



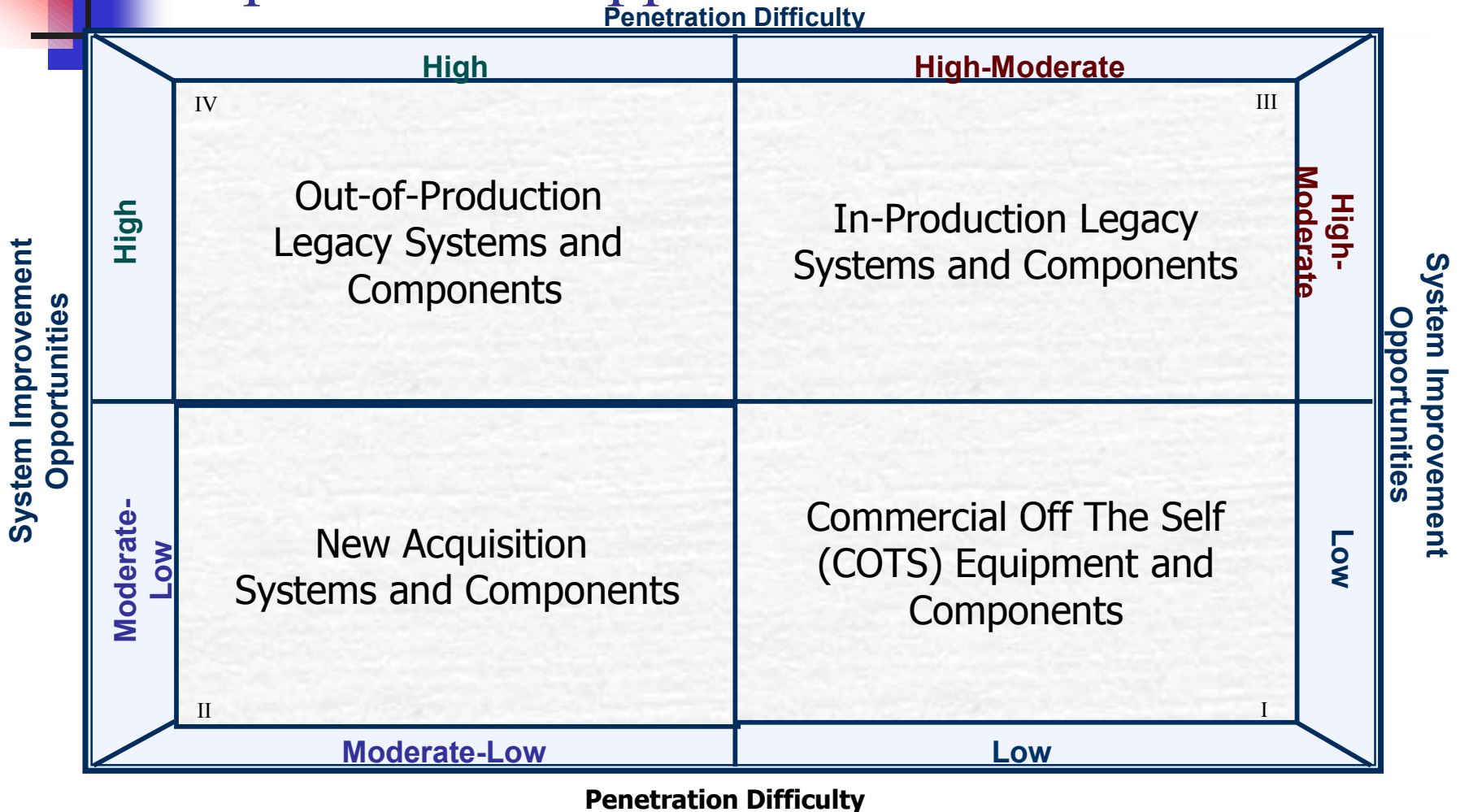


# PBL Market Penetration is Difficult but not Impossible

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- Winning a PBL award is no slam dunk
  - Government desires to protect its infrastructure which PBL threatens
  - US Title 10 places restrictions on the ability of DoD to outsource work
    - Definition of Core Workload
    - 50/50 Rule
    - Application of A76 when 11 or more federal employees might be impacted by outsourcing
  - Government must tradeoff its desire to achieve higher availability, lower cost, and continuous modernization with its desire to maintain infrastructure
  - Contractors must look for win/wins to lower government fears about outsourcing
  - Requires persistence and careful marketing to get a fair hearing

# Degree of Penetration Difficulty / System Improvement Opportunities





# COTS Equipment

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- Most immediate target for PBL offering
  - Commercial infrastructure already in place to maintain, repair and support equipment
  - Commercial best practices already in place to provide support
  - Broad base of users can keep DoD support cost relatively low
  - Planned systems improvements introduced regularly but may not be relevant to evolving War-fighter requirements



# New Acquisition Systems

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- PBL has been mandated as the preferred support strategy
- Primes will most likely flow down PBL performance requirements to their subcontractors
- Organic support base not yet established
- Business case analysis of alternative support concepts is required to provide justification for acquisition of PBL
- Logistics Management Information (LMI) is generally used to perform the comparison of support alternatives
- Entire system is designed with an open architecture and modular design to facilitate technology upgrades
- Stable design using open standards, modular design, and design for residual value could minimize systems reliability improvement opportunity





# In-Production Legacy Systems and Components

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- More difficult to penetrate because support infrastructure is already in place
- Production contractor may leverage his hot-supply base to win award of PBL contract
- Significant issues regarding compliance with US Title 10
- Significant opportunities for systems improvement



# Out-of-Production Legacy Systems and Components

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- Most difficult to penetrate because organic support infrastructure is mature
- PBL approach most often runs afoul of US Title 10 restriction unless parties look for win/wins
- Most significant opportunity for reliability improvements but duration of PBL contract may be limited due to pipeline for replacement new systems



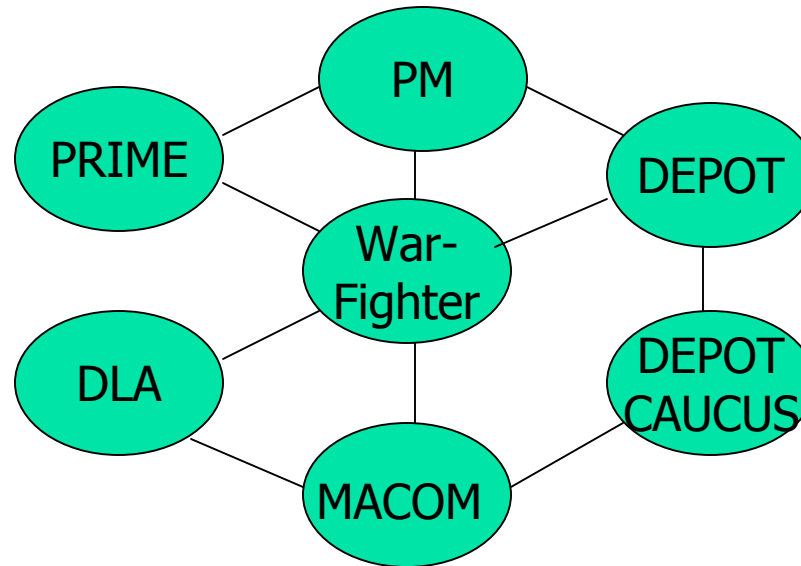
# Business Case Analysis to Evaluate PBL Applicability

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- Business Case Analysis is the principle tool DoD uses to evaluate the applicability of PBL as the preferred support option.
  - Allows “apples-to-apples” comparison of support alternatives
  - Will generally evaluate three support options
    - Current weapons systems management approach
    - PBL approach
    - PBL in partnership
  - BCA provides the basis for completing a Justification for Acquisition (J&A) for a PBL support option
  - Each service uses a different approach to BCA. DAU is attempting to standardize approach
  - BCA when performed well provides an unbiased view of the benefits and burdens of each support approach.
  - BCA when poorly done allows the analysis to be gamed to deliver the result that the proponent wants to achieve
  - A wise supplier will work with his government PM to influence the establishment of metrics, data collection, and evaluation methodology

# PBL Marketing Strategy

## PBL Stakeholders





# What Motivates Them?

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## Program Manager

- Directly accountable to the war-fighter for support infrastructure
- Reduce lifecycle support costs
- Continuously modernize the system
- Mitigate obsolescence risks
- Improve system reliability and performance so that system remains relevant

*You need the PM on your side to run interference with other stakeholders and guide the Business Case Analysis so that you get a fair hearing*



# What Motivates Them?

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## Prime Contractor/OEM

- Control the Product

- Reputation is tied to product success in performance as well as support
- Wants to control the product's definition
- Wants to mitigate legal liabilities based on unauthorized design changes that have downstream impacts
- Wants the revenue stream associated with product support

*You have two alternatives: be squashed like a bug or work with the Prime/OEM to develop a comprehensive support solution with you as part of his team. At least seek his approval before going to the PM*



# What Motivates Them?

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## Depots

- Preservation of the business base to execute their support mission to the soldier
- Improving performance to avoid BRAC
- Protecting labor content so that skills and capabilities are retained
- Improving material throughput to eliminate plant shut downs
- BRAC-proofing through alliances, teaming, and partnerships with Industry

*Depots are PBL neutral unless you are coming after their workload. If you are they will tie you up with US Title 10 and A76 issues until you wither and die. Look for win/win solutions such as supplying parts to their remanufacturing lines, providing technologies and process methods for royalties. Think of them as partners rather than competitors. They make a wonderful ally*



# What Motivates Them?

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## Major Commands (MACOMS)

- Ensuring that war-fighter support needs are satisfied
- Ensuring that high value equipment assets are maintained at the highest state of readiness
- Ensuring that all systems assets are accounted for and available for use, issue, or overhaul
- Preserving a business base large enough to justify current staffing levels

*Major commands are highly threatened by PBL since they are process oriented rather than product oriented. Taking out a weapons system or significant component of a weapons system from their control reduces the business base but does not reduce their overhead. Some eggs must be broken as the PBL omelet is cooked. Major commands may be those eggs*





# What Motivates Them?

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## Defense Logistics Agency

- Maximizing the buying power of DoD
- Maintaining a high material fill rate
- Satisfying war-fighter material demands on a timely basis
- Satisfying Depot and Contractor requirements when programmed funds are available

*DLA is PBL neutral unless you plan to procure materials that they support outside of the DLA system. Find ways to utilize DLA for commodity items but realize that if you are under a PBL performance agreement you better control the entire supply chain. Consider them a preferred provider until they do not perform*



# What Motivates Them?

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## Depot Caucus

- Preservation of government jobs within their voting districts
- Get reelected

*Unless carefully managed the Depot Caucus can be a major show stopper to PBL awards. Resolve as many issues with the Stakeholders of PBL so that they run interference for you with the Depot Caucus*



# Overcoming External Obstacles to PBL

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- Change your strategies to identify win/win solutions that considers stakeholders self-interest
  - How can I turn a competitor into a friend?
    - Change your role from competing for remanufacturing to becoming a reliable parts supplier
    - Share technologies and process methods in return for royalties
  - Discover their self interests and play to them
    - Primes want control. Help them develop a PBL support plan with you as a key provider
    - DLA doesn't want to lose their business base. Use them as a key supplier for low risk parts and materials



# Overcoming Internal Obstacles to PBL

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- Overcome the naysayer
  - We're a manufacturing company let someone else handle product support!
    - PBL is a growth business with opportunities far in excess of the demand for new production
    - PBL provides stable revenue and profit margins because it is predicated on the size of the installed equipment base and a constant annual demand for product support services

# Overcoming Internal Obstacles to PBL



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- Determine your organizations risk tolerance and propose mitigation strategies that make the risk acceptable
  - PBL is a high margin business opportunity predicated on the sharing of risk with the DoD. Higher Margins = Higher Risk Taking
  - Infrastructure Investment Risk – You will be expected to create an infrastructure. Your goal should be to make as many costs as possible variable and scalable in the event the installed base drops precipitously

# Overcoming Internal Obstacles to PBL



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- Investment risk – Inventory: You will be expected to own the inventory. You will need to determine what inventory you are willing to finance and carry
  - Own the equipment and supply chain
  - Own the retail and wholesale supply chain
  - Own the wholesale supply chain
  - Own service spares exchange pool

# Overcoming Internal Obstacles to PBL



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- Create a world class infrastructure
  - Skill base may not be robust enough to handle the exceptional level of planning required to mitigate risk. Select candidates carefully
  - Current systems such as ERP are optimized for manufacturing not product support. Look at advanced planning systems that allow forecasting of material and maintenance requirements in a product support environment
  - Many costs will be out of period with revenue so finance and accounting must be reeducated to understand unfavorable variances in a product support environment
  - Outsource non-core functions to those that can provide them most effectively. There is no glory in selling labor
  - Do not be afraid to team with depots and other government agencies as long as you have mitigated the potential for unfavorable performance



# Summary

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- PBL provides a tremendous new opportunity to service parts and remanufacturing organizations
- PBL looks hard
- PBL is hard but...
- The rewards are worth the effort