Contracting and Performance Agreement Management for PBL

Private sector companies like Caterpillar and Dell use contracts and partnerships to create a virtual organization. Dell draws upon more than 150 vendors, 30,000 field technicians worldwide, and 3,600 technical support personnel. Dell's global reverse logistics network involves a complex exchange of millions of spare parts between supply chain participants, utilizing business processes and a 'World Chain' automation system. Caterpillar (CAT) uses a contract management system, supported by a CAT inventory control system, to monitor supplier performance for its Total Logistics Services contract with the Navy. Mission Readiness 'pre-CAT' was at 12%, it is now at 91%.

In the PBL environment *relationships*, not terms and conditions make contracts work effectively. All of the program managers we interviewed wanted to discuss the relationship aspects of their contract arrangements. Several of our interviews suggested that the contract document was not a major concern. They are viewed as a formal expression of the terms of the relationship rather than day-to-day practicing guidelines. One Navy contractor indicated that the contract was irrelevant. An Army government official noted the same thing. One industry executive commented that the logistics partners know what it takes to fulfill the contract and to keep the job. A logistic manager, however, stated that the strength of the contract will come into play, if or when the relationship is broken and the conditions must be enforced. It is when the relationship doesn't work that the terms and conditions matter.

There was little discussion on how the mechanisms for contracting have changed except for the use of 'alpha' contracting. This is where government and contractor representatives review/analyze/agree on the elements of the proposal as they are developed. These meetings take place after an Industry Day is held. The objective is to avoid the typical sequential time-consuming process and to verify an understanding of the requirements.

The Figure below describes the range of options available to the government, from the traditional organic support to the total system support, and gives examples of each.

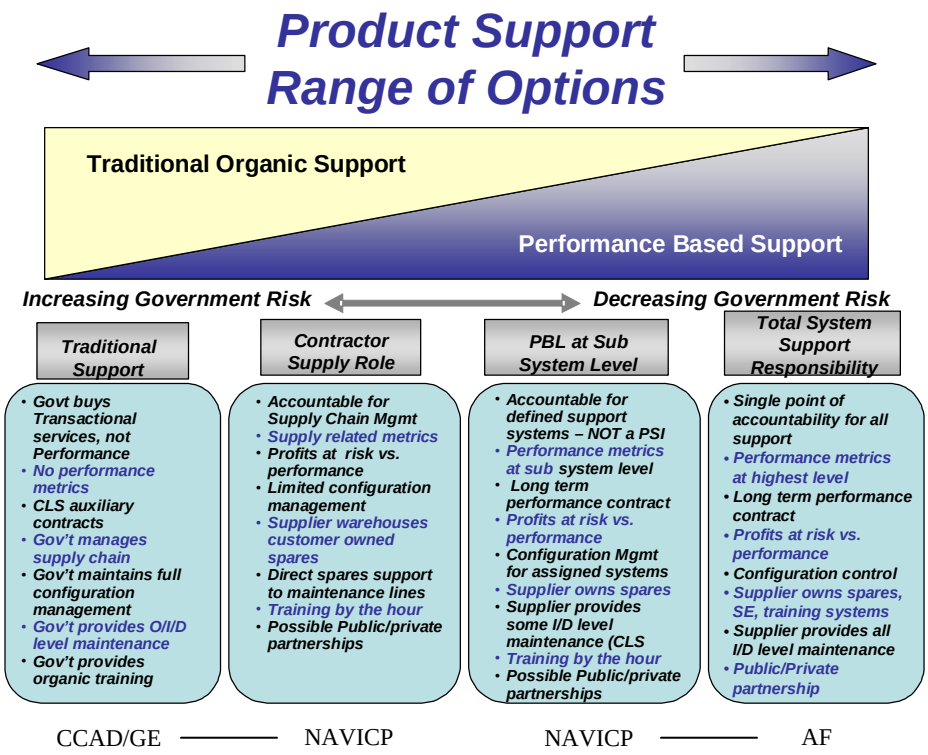

FIGURE 1: PRODUCT SUPPORT RANGE OF OPTIONS

Between the first two (Traditional Support and the Contractor Supply Role) the government controls all of the significant decisions and controls the sustainment of the weapon system. A question for the government manager is "How much control do you really have?" If control exists, why do back orders and parts obsolescence exist? The government's risk is high in traditional support because the government is not only responsible for all aspects of materiel management, but actually doing the work.

As the range of support options move toward one of Total System Support Responsibility the government's project manager and the contractor's program manager move toward an equal share of the risk. It is clear from our interviews that the government is very concerned about risks and works to make sure that an unfair amount of risk is not passed on to the contractor.

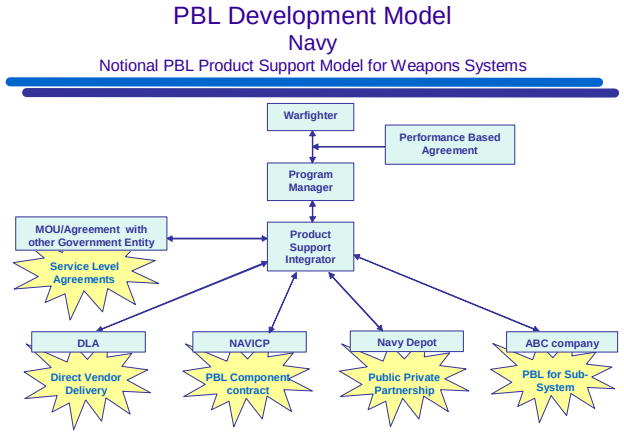

FIGURE 2: NAVY PBL DEVELOPMENT MODEL FOR WEAPONS SYSTEMS [i]

The NAVICP is building its PBL efforts around major subsystems with the Navy as the PSI for system support. One of the initial lessons learned from the product support pilots concluded: "The imposition of a contractor integrated product support strategy on existing weapon systems is exceptionally difficult at the system level. More promising strategies include major subsystem strategies or major upgrades."[ii]

The F/A-18E/F Integrated Readiness Support Teaming (FIRST) concept, an alternative support strategy emphasizes Government/Industry partnerships, risk management and shared accountability. The Navy PBL product support model builds support around subsystems and components. The NAVICP elected to move out and lead the transition to PBL; they launched PBL and have transitioned to new ways of providing parts and services.

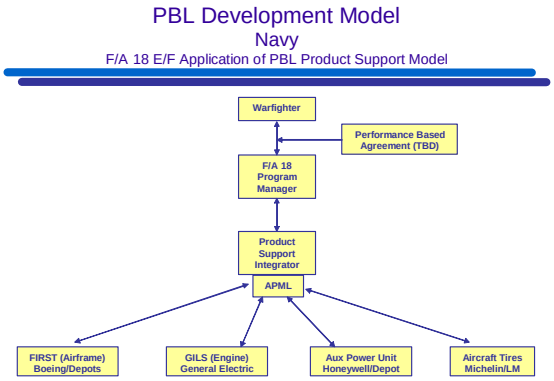

FIGURE 3: NAVY PBL DEVELOPMENT MODEL FOR F/A-18E/F [iii]

The Total System Support Responsibility (TSSR) is the Air Force's approach to PBL. Since the AF weapon systems (aircraft) are heavily dependant on the OEM, it is a natural progression to continue to do business with the OEM after the system is deployed.

PERFORMANCE AGREEMENTS

The Air Force is very satisfied with the performance of its TSSR contractors. The JSTARS is an example of merging together the capabilities of organic depots and the strengths of commercial engineering services firms with the technical knowledge of the OEMs. As shown below, multiple contracts, performance agreements and service level

agreements (SLA) integrate the resources of the government and industry under one major partnership agreement.

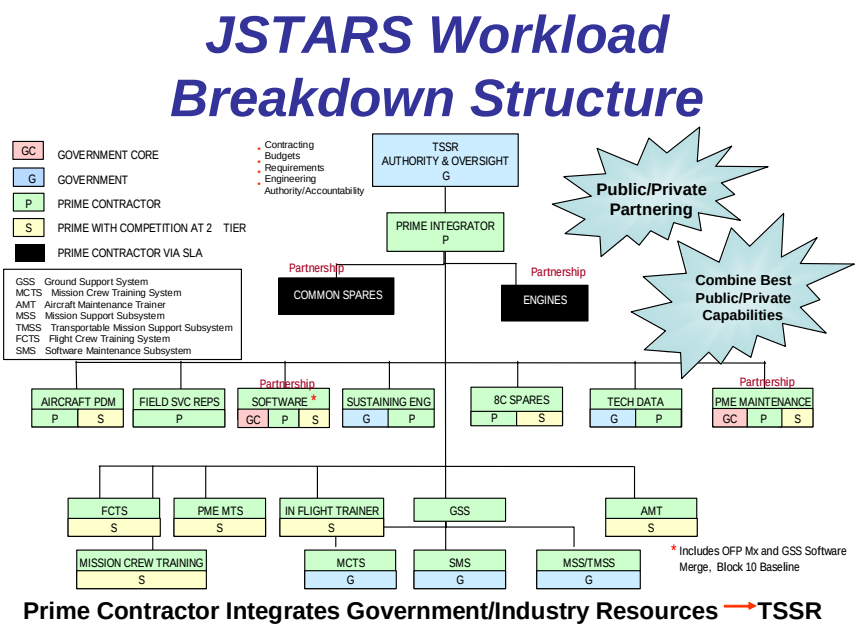

FIGURE 4: JSTARS WORKLOAD BREAKDOWN STRUCTURE [iv]

Within the context of these relationships, the details of who performs what tasks are clearly identified. For example, the government designated engines as a core capability and has responsibility. Other functions, like software, may have multiple vendors responsible, depending on where the software application functions.

When one considers the number and types of government managers involved with the support of a weapon system, the need for partnerships and IPTs is clear. The following figure is representative of the complexity of product support needed for a typical Army system. These organizations are only the top-level, underneath are additional organizations and hundreds of commercial vendors who actually deliver the system's components.

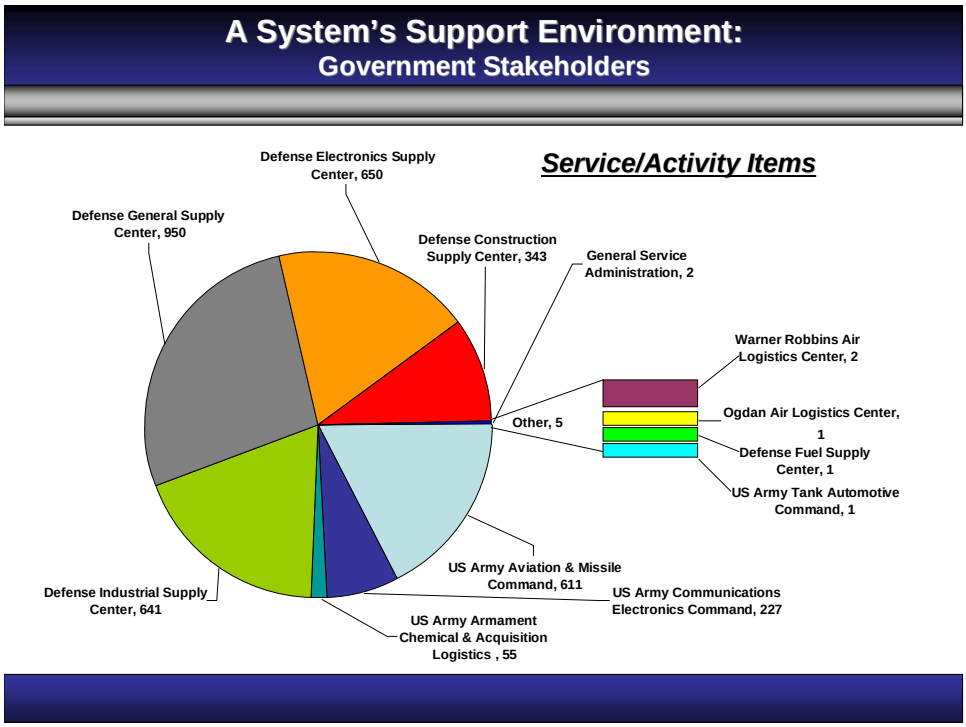

FIGURE 5: SYSTEM SUPPORT ENVIRONMENT

This particular system support environment totals almost 3,500 components. The number increases exponentially when supplier and vendors are added. The magnitude of the support environment is a clear indicator of the complexity of the partnership environment. The development of partnerships and service level agreements requires a balance of power and incentives to make it all work. When it happens, the combined energies are enormous, creating a synergy that pushes accomplishments to level previously unthinkable.

The scope of work to be supported with an agreement or partnership can range from a simple DoD facility lease to full system support. Fourteen characteristics for successful partnerships and the benefits to be gained are given below.

SUCCESSFUL PARTNERSHIPS	
Success characteristic	**Reason for/Benefit of partnership**
Long-term relationship and commitment	A long-term relationship and commitment (1) permits both contractors and depots to better plan future workload requirements and create a better business case for the contractor to make investments to improve depot repair capability and (2) allows the contractor to help manage parts obsolescence.
Shared partnership vision and objectives	Having partners share the same partnership vision and objectives helps ensure that the partners will not be working at cross-purposes.
The right metrics and incentives	The right metrics and incentives are needed to effectively measure that progress is being made and ensure that the partners are effectively motivated to achieve partnership goals and objectives.
Early acquisition community involvement	Developing the partnership with acquisition community involvement during the early phases of a weapon system's acquisition helps to ensure that any additional depot maintenance capability development needed is fully planned and funded.

SUCCESSFUL PARTNERSHIPS	
Success characteristic	**Reason for/Benefit of partnership**
Complementary skills and abilities	Each partner should bring complementary skills and abilities to the partnership because if each partner's capabilities are the same, the relationship may result in a competitive and potentially adversarial relationship, not the cooperative synergistic relationship hoped for in a partnership.
Senior-level advocacy and support	DoD and contractor senior management support for a partnership is necessary to ensure that the effort receives the focus and resources needed to achieve success.
Sound business case analysis	A comprehensive business case analysis, including expected outcomes, should be conducted as part of the decision process for entering a partnership to ensure a sound result benefiting both the depot and the private-sector partners.
Mutual trust and shared risk	The partnership should be firmly grounded in mutual trust, open communications, and balanced risk among partners.
Flexibility to change partnership scope	To ensure the ability to adapt to changing circumstances or factors, the partnerships should have the flexibility to change the partnership scope.
Balanced workload	Workload should be balanced among the partners to ensure meaningful involvement for each partner and ensure that one partner does not receive only low-skilled work or no work at all.
Independent review and oversight	Independent review and oversight provides an objective assessment of whether each partnership is achieving the expected benefits and that each partner performs as expected. Such a review also provides a basis for correcting or redirecting partnership efforts if expectations are not being met.
Enforce partnership decisions and requirements	To ensure successful partnering efforts, the partners' senior management must provide a mechanism for enforcing compliance with partnership decisions and requirements.
Full coordination with all stakeholders	Public-private partnership efforts should include steps to get feedback from all stakeholders on planned efforts and adjust the partnering strategies to reflect legitimate concerns of these stakeholders.
Clearly documented objectives in partnering agreement	Once clear mutual partnering objectives are determined, they should be documented into a formal partnering agreement. The documentation can provide for dispute mediation and resolution, and also help delineate each partner's liability.

TABLE 1: SUCCESSFUL PARTNERSHIPS

NEW UNDERSTANDING

With PBL, traditional functions of the government are shifted to the contractor without giving up the "core" capabilities, allowing the government to maintain the capability but relinquishing the performance of the service to the contractor. For example, an Item Manager (IM) is concerned with individual parts and the supply of specific items. With a PBL arrangement the item manager is now a manager of suppliers not parts. Where, who, how many, etc. are now the work of the contractor.

In this new role, the IM is responsible for pricing to recover costs, helping with development of the bill of materials (BOM), scheduling repairs and forecasting (with the contractor) the out year requirements. The contractor will handle ordering and inventory accountability of parts along with the flow of materials etc., to ensure the work line is not interrupted. The new IM must provide input to the evaluation of the contractor's performance, determining payment and award fee, if applicable.

This changing role of the IM indicates changes are required in the decision making

process. Ultimately, the question is how much responsibility should be given to the contractor.

DECISION FRAMEWORK

A study by Lawther [v] (2002) presents two dimensions to consider when deciding how much control to retain: uncertainty and complexity. These dimensions are dependent; as complexity increases, uncertainty increases. The reverse is also true, with less complexity there is less uncertainty.

The technical expertise required to do the work determines complexity. A continuous review of the extent to which the contractor has the knowledge, training, and education needed to do the work should be part of the contracting process.

In the following examples, we use the term Logistics Manager (LM) for the government's representative. In most cases this role is actually an integrated product team (IPT) or integrated product support team (IPST). One of the fundamental changes in the DoD acquisition culture requires that individuals and organization change from a hierarchical decision-making process to one where decisions are made across organizational structures by multidisciplinary teams. The teams are formed when the first consideration is given to outsourcing. The IPT includes representatives of all stakeholders (government and/or private sector functional experts) and, if it is a joint operation, other services. DLA is often invited to participate.

Based on Lawther, the government is required to maintain a high level of functional knowledge about the means of delivering a service unless the results are clearly visible and easy to measure, or if the service is routine. The more complex the delivery of a service, the more important it is for the LM to have a knowledge of how the work should be performed. How well the LM is able to measure the contractor's performance is the most significant factor in making this determination.

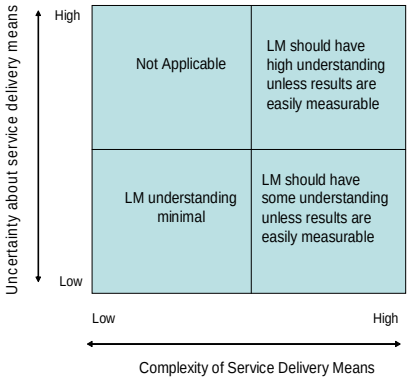

FIGURE 5: KNOWLEDGE OF SERVICE DELIVERY MEANS

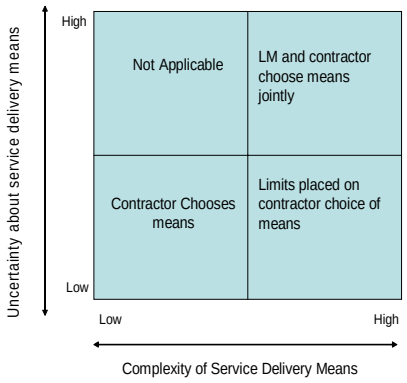

FIGURE 6: DISCRETION TO CHOOSE SERVICE DELIVERY MEANS

Under *low uncertainty and low complexity* the LM needs only a minimal understanding of the contractor's work processes and lets the contractor choose the best methods or 'means' for delivery of the service. As with the GE engine program, GE manages, forecasts, stores, and delivers routine parts on time to the depots. A PBL contract may require a certain number of engines in stock and all other details would be managed by the contractor.

Under *low uncertainty and high complexity* the LM can allow freedom to the contractor, within certain limits. The LM does not need an in-depth knowledge if reasonable assurance of the contractor's expertise exists and if identifiable milestones or delivery dates have been established. An example of this is allowing contractors to make technology changes that are transparent to the user. The use of the OEM is one way to be sure that the expertise exists.

Under *high uncertainty and low complexity* the LM is left to make each decision on its own merits. This is similar to delivering parts to an OCONUS based unit; the uncertainty of proper delivery is compounded by the foreign customs and the conflict.

Under *high uncertainty and high complexity* the LM must have both knowledge of contractor work processes for the delivery of services and joint decision-making responsibility with the contractor. In such cases, the government works closely with the contractor to define, approve, and implement the changes. If valid output/outcome measures are available, and a performance contract is in place, the contractor may be allowed greater discretion. The incentive and/or penalty portion of the contract must be enforced or the service quality level may decline.

Where evolving technology or custom solutions are required, the choice of means must be an ongoing effort between the contractor and government technical and program managers.

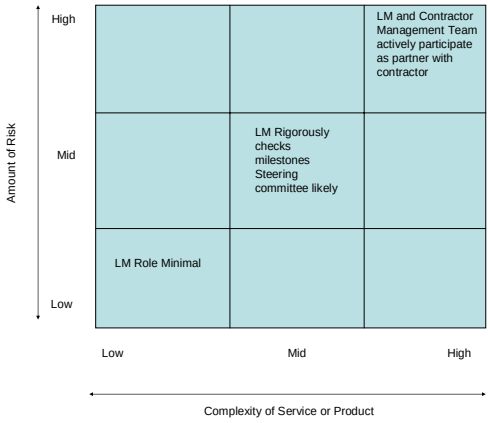

FIGURE 7: INFLUENCE OF RISK ON LM CONTRACTING ACTIVITY

Figure 15 illustrates the dimensions of risk and complexity. Clearly under conditions of low risk and low complexity the LM should play a minimal role. As complexity increases the LM takes on additional responsibilities. The LM provides oversight through the evaluation of milestones and metrics, and may provide strategic guidance through the use of steering committees. When the level of risk and complexity is at its highest, the LM and contractors forge partnerships.

Risk, the likelihood that the service will not be provided, or the product delivered, is always a factor. Risk is dependent upon how important the delivery of the service/product is to accomplishing the organization's goals or mission and how large a negative impact will occur if the goal is not met. It is also depends on the number of available suppliers for the product or service and how easy it is to cancel the present contract and write a new one. Risk is also dependent on the LM's knowledge, skills and ability to find a solution to service delivery problems. [vi]

Ultimately the challenge for AMCOM is to find a way to provide the appropriate level of service to the PEO community. Integration of specific system support requirements with the commodity type support currently provided across weapon systems is realistically labeled "The Real Challenge" in Figure 16, from the DAU Road Show.

The integration challenge can be managed at either the system level or the subsystem level. The dimensions of risk, uncertainty and complexity must all be considered before making this determination. If the levels of the three dimensions increase, compounding with each subsystem element, the LM is better off integrating at the system level.

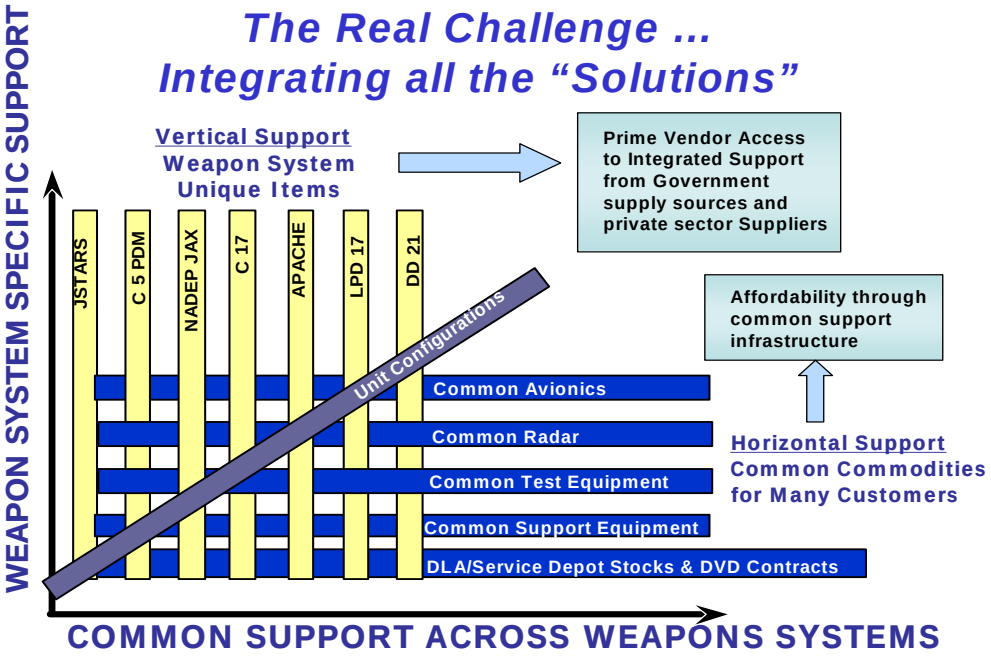

FIGURE 8: INTEGRATION CHALLENGES ACROSS SYSTEMS

As support moves from legacy to future systems the levels of uncertainty, risk and complexity all increase. Issues in Figure 17 are three classes of systems; legacy, current, and future. Future systems are those that are currently under development and the PEO is incorporating improved sustainment technology and practices. (The RAH-66 Comanche is a good example; see Appendix II for additional information.) Since current systems are still in production they offer opportunities to update with block level upgrades. Legacy systems offer opportunities for incremental improvements. The greatest improvements in customer wait time (CWT) are made as PBL implementation reaches the full TLCSM spectrum.

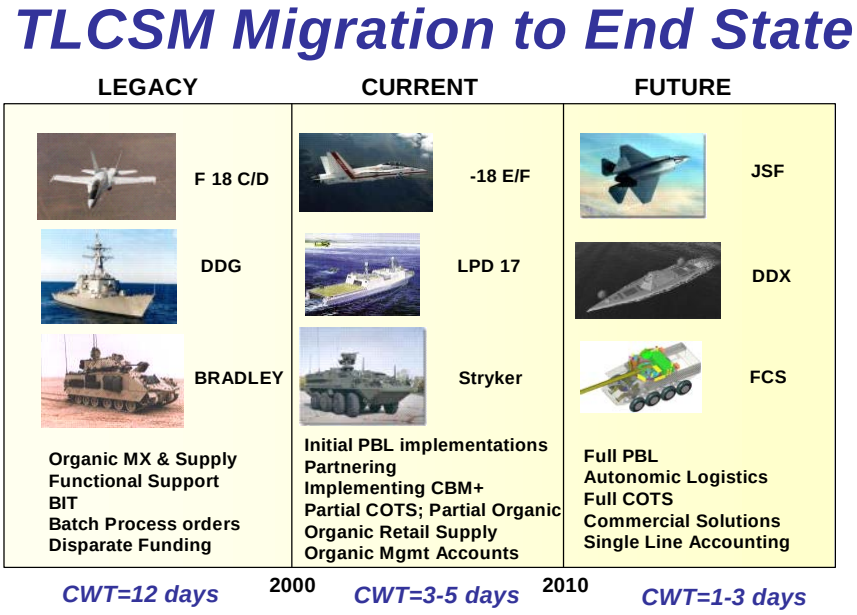

FIGURE 9: TOTAL LIFE CYCLE SYSTEM MANAGEMENT MIGRATION

DEVELOPING INCENTIVES

After selecting the PBL strategy, the next step is to provide the proper incentives to ensure the contractor will be successful. This requires a two-step process for assessing performance.

The first step is to assess the incentive structure of the contract, the financial rewards and the length of time available for contract extensions. Just as a successful coach receives a contract extension and financial rewards for winning a certain number of games, logistic managers and contractors need to build similar mechanisms into contracts to provide incentives for making the services better, faster and cheaper.

The second step is assessing performance metrics. Just as the coach must win at a specified level, so must the contractor perform to a specified level. The type and level of performance the customer needs drives the selection of the right metrics.

The DWCF's activities are required to have performance metrics. A sample list is in the Financial Management Appendix V. The AF computes the Not Mission Capable Supply Rate (NMCSR) for each weapons system, not parts, such as engines. The Navy uses performance metrics based on the contract requirements.

SAMPLE NAVY PERFORMANCE METRICS
1. Fill Rate – A percentage of all requisitions that were transmitted to the contractor that are filled within the specified number of metric days. The number of days must be specified because different contracts have different required 'standard' fill rates.
2. Total Number Open Requisitions (Not in Backorder Status) - The total number of requisitions with no shipment or receipt data.
3. Backorders – A count of the number of unfilled requisitions at the contractor's plant older than number of days specified.
4. Mean Backorder Age – Average of the number of days a requisition is 'backordered' at the vendor.
5. Requisition Open Past ESD (Estimated Shipping Date) – Count of requisitions open past the vendor's Estimated Shipping Date or PBL contract original delivery date.
6. Logistics Response Time (LRT) – The average time between generation of a requisition and receipt of the material by the customer.
7. KTR Shipment Time – The average time between referral/award date and shipment to the customer (turnover to freight carrier).
8. KTR Carrier Shipment Time – The average time taken for a freight carrier to deliver material to the first destination deliver point.
9. Total KTR and Carrier Response Time – The average total time between the contractor's receipt of an order and the receipt of the item at the first destination consignee.
10. Requisition Processing (Total Number Closed Requisitions) – the total number of requisitions with a valid ship date.
11. Requisitions Open Past Requisition RDD (Required Delivery Date) – Count of requisitions open past the Requisition Required Delivery Date.

TABLE 2: NAVY PERFORMANCE METRICS

Incentives and metrics also link to the factors of risk, uncertainty and complexity. The greater the risk, uncertainty and complexity the greater the level of incentive required to ensure successful completion of tasks. In the typical marketplace, if a firm engages in an activity where the risk is great, the uncertainty is high, and the complexity difficult, the stockholders expect profits to increase with the level of effort.

Contracting offers a variety of mechanisms to protect the government and reward the service providers. Specifically, the mechanisms include Award Fees, Graduated Award Fees, Award Terms, Fixed Fees and Fixed Terms. The following Table provides a comparison of selected incentives.

COMPARISON OF SELECTED INCENTIVES
Award Fee The Government determines and measures a contractor's performance within specifically designated performance categories, evaluation criteria, and evaluation periods.
Targeted Use: Cost Reimbursement and Fixed Price Contracts, **Benefits:** Plan can be revised when necessary to adapt to program changes. 2. Can be adapted to flow down as individual worker bonuses, making the incentive real and personal. 3. Incentives can be based on simple, reasonable, achievable, and measurable performance. 4. Can construct based on the acquisition. 5. All profit/fee can be based on performance.
Weaknesses: 1. Requires careful review of the statement of work. 2. Requires administrative time investment. 3. Requires carefully documented record of performance and consistent records. 4. Focus on end item performance. 5. Doesn't link contractor performance evaluation to Government actions. 6. Requires balance between cost, schedule, and task performance so that one area is not emphasized over another.
Process Elements: 1. Define the evaluation periods and the amount of award fee available for each period. 2. Describe the general procedures to determine the earned award fee for each evaluation period. 3. Define the evaluation criteria. 4. Identify the Fee Determining Official (FDO), the Award Fee Review Board (AFRB) members by position and the Performance Monitors by function with descriptions of their roles in the Award Fee Process.
Graduated Award Fee An approach to award fees that layers incentive elements.
Targeted Use: Competing areas of focus within a program. Where attention to "macro" or "overriding" elements of performance is required. Where there is a good understanding of the tradeoffs between performance levels. **Benefits:** Better attention to "macro" or "overriding" performance elements. Improved synthesis of performance elements (inability to maximize one element at the expense of another). Flexibility in establishing the "right" performance hierarchy for a particular requirement.
Weaknesses: 1. Requires substantial resources to manage. 2. Impact of award fee incentive can be magnified negatively if "wrong" higher-level performance element.
Process Elements: As an example, the first layer of award fee elements might include strong technical performance in an area, on-time schedule performance as indicated by milestone achievement, and application of a cost tool such as CAIV. The next and "higher" level of award fee might be overall cost control. During award fee review and determinations, the first layer of elements are assessed and assigned "pure" element values. An overall award fee is established based on this first layer. This award fee then is subject to adjustment, up or down, based on evaluation of the higher-level award fee.
Performance Based Incentives Effective performance-based contracts: define work in measurable, mission related terms; contain performance standards; include quality assurance plans for measuring performance; and provide financial incentives and penalties based on performance.
Targeted Use: Includes quality performance and may be positive, negative, or a combination of both. Should be applied selectively to discourage inefficiency and to motivate contractor efforts that might not otherwise be emphasized. **Benefits:** 1. Profit is tied to achievement of specific technical performance objectives, delivery schedules, or cost control objectives. 2. Can combine multiple incentive arrangements within a single contract (e.g. use both an incentive fee as well as award fee combined with cost reduction incentives.) 3. Directs contractor management attention to desired performance. 4. Improves communication.
Weaknesses: 1. Requires real communication between the parties and within the Government organization to ensure that performance objectives, measures, and any other incentives are understood as part of the overall objectives of the program. 2. Structuring all incentives to work together and drive the desired contractor behavior is likely to be complex. 3. Processes and procedures for the application incentives must be documented and understood. 4. Care must be taken to ensure there is a balance in the incentives. 5. Requires constant monitoring and attention. May create complex administrative tasks. Cost tracking at the performance level must ensure baselines are followed.
Process Elements: Should be challenging, yet reasonably attainable. The goal is to reward contractors for outstanding work but not penalize them for work that is fully satisfactory but less than outstanding. The definition of standard performance, maximize positive and negative performance incentives, and the units of measurement should be established in the solicitation. Care must be taken to ensure that the incentive structure reflects both the value to the Government of the various performance levels and a meaningful incentive to the contractor. The incentive amount should correspond to the difficulty of the task required but should not exceed the value of the benefits the Government receives.

Targeted Use: Establishment of long-term contractor relationships with proven producer of products or services. Designed to incent the contractor to execute an orderly transition of workload, provide superior support, and control prices. Benefits: 1. Strongly incents contractor performance. 2. Supports long-term sources of quality services and products. 3. Enables supplier to make investments in process improvements that it might not otherwise make when facing short-term or uncertainty in periods of performance. 4. Allows Government to extend performance parameters and accelerating completion. 5. States Government priorities explicitly and gives contractor more autonomy in achieving desired results. 6. Contractor knows the expected outcome up-front and the requirements for success.
Weaknesses: 1. Can be a challenge to monitor contractor progress accurately. 2. Reward must be sufficient to drive desired behavior throughout contract performance. 3. Can be a challenge to define the reward scheme precisely so that it drives proper behavior. 4. Care must be taken in assessing pricing for extension periods.
Process Elements: 1. Structure similar to award fee but the incentive is periods of performance rather than cash. 2. Effective if performance metrics are objective. 3. Effective when a long-term business relationship is of value to the Government and the contractor. 4. Points are awarded during each year of the contract based on performance in each performance measurement category. 5. Decisions on extending or shortening the award term are made on a year-by-year basis, based on a moving multi-year average of the contractor's overall point total. 6. Extensions can be set, based upon performance that exceeds requirements rather than just meeting requirements.
Share in Savings (SIS) Strategy Encourages contractors to apply ingenuity and innovation to get the work done quickly and efficiently and share in the savings attributed to their planning and execution.
Targeted Use: Best used when ROI is big enough to make this a viable business proposition for the contractor. Shifts risk from Government to contractor with commensurate opportunity for contractor reward for successful performance. Requires partnership approach between Government and contractor due to risks involved. Idea is to allow contractor to apply ingenuity and innovation to efficiently deliver the requirement instead of dictating the Government preferred approach. Can be added to FP for critical areas. Can also guarantee no fee, promising payment only when benefits result from the contractor's efforts. **Benefits:** 1. Requires real communication between the parties and within the Government organization to ensure that performance objectives, measures, and any other incentives are understood as part of the overall objectives of the program. 2. Structuring all incentives to work together and drive the desired contractor behavior is likely to be complex. 3. Processes and procedures for the application incentives must be documented and understood. 4. Care must be taken to ensure there is a balance in the incentives. 5. Requires constant monitoring and attention. May create complex administrative tasks. 6. Cost tracking at the performance level must ensure baselines are followed.
Weaknesses: 1. The Government and the contractor must agree if there is a decision to re-invest. 2. The financial mechanics may be difficult to arrange given the issues with comptroller processes and the current appropriation laws.3. May be difficult for small businesses to participate as primes (this form of contract may often require upfront contractor investments that are paid back only in out years.)
Process Elements: 1. Need to be able to establish baseline and methodology for calculating benefit pool. The baseline and methodology do not need to be perfect, as long as there is advance notice of what the baseline or methodology is, contractor buy-in, and consistent application post-award. 2. The Government identifies a monetary benefits pool that successful contract performance will achieve. The benefit pool may by "on-budget" (e.g. reduced O&M spending or reduced spare parts procurement) or "off-budget" (e.g., improved system performance, decreased downtime). 3. The Government then pays the contractor an agreed upon portion of the monetary benefits earned under the contract. In a 100% share-in savings contract, the contractor's entire payment is in the form of a percentage of benefits realized. Alternatively, the contractor may be paid a base fee/profit plus a (smaller) percentage of the benefits. In a reinvestment variation, there can also be an election by the contractor to reinvest all or part of that savings.
Early Completion Bonus Incents early delivery of product or service.
Targeted Use: Best used when value of early completion is clear and value can be established for reward. Benefits: Places premium on schedule performance.
Weaknesses: 1. Requires balance between other program objectives and schedule to ensure all requirements are met. 2. Requires careful evaluation and substantiation for value of early completion.
Process Elements: 1. Offerors bid a target completion date as well as a schedule of rewards or penalties for deviation from the target completion date. 2. Both the target and the reward or penalty structure should be evaluation criteria for source selection of competitive procurement.

TABLE 3: COMPARISONS OF SELECTED INCENTIVES [vii]

APPENDIX:

Partnerships

DEPOT MAINTENANCE PUBLIC-PRIVATE
Partnerships Reviewed and Depots Visited

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Anniston Army Depot			
Stryker-1 (2001)	General Dynamics Land Systems	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$2 million
Direct sale/government-furnished resources–Depot performs finishing operations, paints the vehicle and provides production services. The contractor performs vehicle test and acceptance and supplies all parts and material for the production of the vehicle. Both the depot and the contractor perform vehicle assembly			
Stryker-2 (2001)	General Motors Defense	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$40,000
Direct sale–Depot performs hull and component modification and repair. The contractor performs vehicle assembly, test and acceptance, and provides all parts and material.			
Fox Vehicle Upgrade-Services and Facility Use (1996)	General Dynamics Land Systems	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$1 million
Direct sale/lease–Depot performs vehicle hull upgrade, tail upgrade, paints vehicle, disassembles engine, and removes asbestos. The contractor performs vehicle disassembly and reassembly, sub assembly, component rework, and systems integration and test.			
Fox Vehicle Maintenance-Facility Use (1996)	General Dynamics Land Systems	Provided collocation with related Fox vehicle upgrade partnership.	$30,000
Lease–Depot provides use of a facility. Contractor uses facility to receive, store, and issue Fox vehicle subassemblies, components and parts for fielded vehicles.			
Gunner's Primary Sight Manufacturing (1997)	General Dynamics Land Systems	Depot had available production facilities needed by the contractor.	$85,000
Lease–Depot provides use of a facility. Contractor performs manufacture of a new gunner's primary site.			
M113 Family of Vehicles Overhaul and Conversion (1997)	United Defense Limited Partnership	Program manager directed work share and contractor sought out depot for its unique capabilities.	$15.9 million [1] January 1997 through March 2002
Work share/lease–Depot performs vehicle disassembly, hull overhaul and conversion, and provides the "dismate" power pack. The contractor overhauls subassemblies and components, performs engine and suspension modification, vehicle assembly, systems integration and test, and final paint.			
M1/M1A2 Upgrade (1994)	General Dynamics Land Systems	Program manager directed work share.	$15.3 million
Work share–This is a partnership for the upgrade of the M1 tank to the M1A2 version. Depot performs vehicle receipt, disassembly, hull rework and upgrade, demilitarization of the turret, overhaul of major subassemblies and components, and then ships tank parts to the contractor in Lima, Ohio. Contractor performs vehicle reassembly, turret installation and systems test and integration.			
Partnership for Reduced Operation and Support Cost–Engine (1999)	Honeywell	Program developed by program manager, contractor, and depot to enhance current depot engine overhaul programs, and reduce operations and support costs.	$31,000

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Lease–Depot provides use of underutilized facility to contractor. Contractor uses facility to supply parts and material to support the depot's turbine engine repair/overhaul line.			
Recuperator Plate Manufacturing (1998)	Honeywell	Base realignment and closure (BRAC) process closed a government-owned facility where contractor performed work.	$200,000
Direct sale/lease–Depot provides material handling and movement, and the contractor manufactures recuperator plates.			
Abrams Integrated Management for the 21st Century (1996)	General Dynamics Land Systems	Program manager directed work share.	$47 million
Work share–This is a partnership for a recapitalization of the M1A1 tank. Depot performs vehicle receipt, disassembly; overhaul of hull, turret, and major subassemblies and components; and ships the tank to contractor in Lima, Ohio. The contractor performs vehicle reassembly and systems test and integration.			
Hercules (1998)	United Defense Limited Partnership	Program manager directed work share.	$9 million [1] January 1998 through March 2002
Work share–Depot performs vehicle disassembly, structural repair of the hull and front blade repair. Contractor performs modification, reassembly, and systems test and integration.			
Paladin (1998)	United Defense Limited Partnership	BRAC process closed a government-owned facility where contractor performed work.	$1.6 million [1] January 1998 through March 2002
Work share–Depot performs overhaul and conversion of chassis assembly and armament system, and provides turret kit components. Contractor fabricates and assembles the new cab, performs vehicle reassembly and systems test and integration.			
Wolverine (1998)	General Dynamics Land Systems	Program manager directed work share.	$1.6 million
Work share–Depot performs vehicle disassembly, hull rework, demilitarization of turrets, overhaul of major subassemblies and components, and ships the vehicles to the contractor in Lima, Ohio. Contractor performs chassis assembly, procures and installs bridge systems, and conducts inspections and testing.			
Opposing Forces Surrogate Vehicle (1999)	United Defense Limited Partnership	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$8.2 million
Work share–Depot fabricates unique parts and spares; disassembles vehicle; cleans, machines, and repairs hull; repairs, converts and paints; and assembles and integrates turret. Depot also performs program management functions. Contractor overhauls subassemblies and components, modifies engine and suspension, assembles and paints vehicle, and performs final systems integration and testing.			
Corpus Christi Army Depot			
T700 Engine Overhaul and Repair (2000)	General Electric	Desire to reduce repair turnaround time.	$87.7 million [2]
Teaming–Depot provides the labor, facilities and equipment for the overhaul and repair of airframes and components. Contractor provides technical, engineering and logistical support, and spare parts to improve repair turn around time.			
H-60 Overhaul and Repair of Airframe and Structural Components (2000)	Sikorsky Aircraft Corporation	Desire to reduce repair turnaround time.	-- [3]
Teaming–Depot will provide the labor, facilities and equipment for the overhaul and repair of airframe and components. Contractor will provide technical, engineering and logistical support to improve repair turnaround time.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
AH-64 Apache and CH-47 Chinook Overhaul and Repair of Airframe Structures and Components (2000)	Boeing	Desire to reduce repair turnaround time.	-- [3]
Teaming–Depot will provide the labor, facilities and equipment for the overhaul and repair of airframes and components. Contractor will provide technical, engineering and logistical support, and some parts on an emergency basis.			
T55/T53 Engines Overhaul and Repair Activities (2000)	Honeywell	Desire to reduce repair turnaround time.	-- [3]
Teaming–Depot will provide the labor, facilities and equipment for the overhaul and repair of engines. Contractor will provide technical, engineering and logistical support, and some parts to depot workstations.			
Red River Army Depot			
Bradley Fire Support Team Vehicle (2000)	United Defense Limited Partnership	Program manager directed work share	$17.5 million
Work share–Depot modifies and overhauls the A2 configuration of the Bradley fighting vehicle and transports the vehicle to the contractor's York, Pennsylvania facility. Contractor integrates the Bradley Fire Support Team capability into the vehicle.			
Heavy Expanded Mobility Tactical Truck (2001)	Oshkosh Truck Center	Program manager directed work share.	$7.5 million
Work share–Depot and contractor overhaul or recapitalize a complete vehicle and each partner performs work on an equal number of vehicles.			
Multiple Launch Rocket System M270A1 (2000)	Lockheed Martin	Program manager directed work share.	$700,000
Work share–Depot is overhauling vehicle chassis and components and transports completed chassis to contractor's overhaul facility. Contractor integrates and upgrades the Loader Launcher and its related components.			
Multiple Launch Rocket System Hoist Assembly (2001)	Lockheed Martin	Contractor sought out depot for its unique capabilities.	$347,200
Direct sale–Depot repairs the hoist assemblies and ships them to the contractor's plant in East Camden, Arkansas. Contractor installs the hoist on the vehicle.			
M915A4 Glider Program (2001)	Lear Sielgler	Contractor sought out depot for its unique capabilities.	$157,000 [1] March 2001 through March 2002
Direct sale–Depot provides support for testing qualifying and painting the engine and cleaning and painting the axel.			
Small Emplacement Excavator (2002)	Stewart & Stevenson Tactical Vehicle Systems	Contractor sought out depot for its unique capabilities.	-- [3]
Teaming–Depot and contractor have agreed to cooperate in potential partnerships on mutually beneficial programs and solicitations.			
Patriot Missile Conduit Cover Shields (2001)	Lockheed Martin	Contractor sought out depot for its unique capabilities.	$4,600 [4] During the partnership's 2-month period of performance
Direct sale–Depot provides all raw material and labor to manufacture Patriot missile conduit cover shields for the contractor. Contractor incorporates the shields into the Patriot missile.			
Tobyhanna Army Depot			
Communications Security Cryptographic Equipment (2002)	Titan Systems	Contractor sought out depot for its unique capabilities.	$4,900 [1] June 2002 through December 2002
Direct sale–Depot repairs circuit cards, which contractor uses in repair of communications security cryptographic equipment.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Brackets and Racks, Local Area Network Box and Panel Display (2001)	TRW	Contractor sought out depot for its unique capabilities.	$137,000 [4] August 2001 to February 2002
Direct sale–Depot fabricated six items–Local Area Network Box Assembly, Remote TAU Radio Box Assembly, Flat Panel Display Assembly, V1 RWS Rigid Kit, and Router Adapter Plate Assembly. Contractor installed these parts in communications shelters as part of retrofit program.			
FIREFINDER Block II Program (1999)	Raytheon	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$305,000
Direct sale/teaming–Depot designed, manufactured, and tested two engineering development model Prime Power groups for the program; and provided cabling and interfaces needed to mount Portable Operations Suite in vehicles and power transfer boxes, as well as integration, test and logistics support at the system level. Contractor is responsible for overall design and manufacture of the weapon system.			
FIREFINDER AN/TPQ-37 Radar (2001)	Raytheon	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$300,000
Teaming–Depot produces modular azimuth positioning system kits. Contractor incorporates kits into AN/TPQ-37 FIKREFINDER radars.			
Prophet Block I Cable Assemblies (2001)	Titan Systems	Contractor sought out depot for its unique capabilities.	$209,000 [1] June 2001 through March 2002
Teaming–Depot manufactures cable assemblies. Contractor is the prime for electronic warfare system that uses these cable assemblies.			
Area Common User System Program (1998)	CMC Electronics	Contractor sought out depot for its unique capabilities.	$500,000
Direct sale/teaming–Depot designed and manufactured modification installation kits that are installed by Laguna Industries at the depot and Fort Hood. The contractor provides the radio that is connected to existing systems using the depot's installation kit.			
Weapon Systems Omnibus-1 (1999)	Blackhawk Management, Inc.	Contractor sought out depot for its unique capabilities.	$941,000 [1] December 1999 through March 2002
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
AN/PRC-112 Modernization (2001)	EPS	Contractor sought out depot for its unique capabilities and to meet new weapon system title 10 core depot maintenance requirements.	$100,000
Direct sale/teaming–Depot assembles and warrants the field radio. Contractor manages overall contract and provides depot components needed to assemble the radio.			
CECOM Field Support Services-1 (2000)	EPS	Contractor sought out depot for its unique capabilities and advantageous labor rates.	-- [5]
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets its team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
CECOM Field Support Services-2 (2000)	Logistics, Engineering & Environmental Support Services, Inc.	Contractor sought out depot for its unique capabilities and advantageous labor rates.	-- [5]

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Rapid Response to Critical System Requirements (1998)	ARINC	Contractor sought out depot for its unique capabilities.	-- [5]
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Rapid Response to Critical System Requirements (1998)	Lear Siegler	Contractor sought out depot for its unique capabilities.	-- [5]
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Rapid Response to Critical System Requirements (1998)	Lockheed Martin	Contractor sought out depot for its unique capabilities.	$2,600 [1] October 1998 through March 2002
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Navy Tri-Service (1999)	ARINC	Contractor sought out depot for its unique capabilities.	-- [5]
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Weapon Systems Omnibus-2 (1999)	Information System Support Inc.	Contractor sought out depot for its unique capabilities.	-- [5]
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Satellite Communications Equipment (2002)	Signal Corporation	Contractor sought out depot for its unique capabilities.	-- [5]
Direct sale/teaming–Depot participated in program to secure repair workload on critical systems in order to help maintain critical capabilities and skills at the depot. The contractor markets the team's capabilities to potential customers and provides depot and other subcontractors with components for repair.			
Naval Aviation Depot Cherry Point			
P-3, S-3, C-2, and F/A-18 Auxiliary Power Units (2000)	Honeywell	To satisfy title 10 core depot maintenance requirements for the workload involved and contractor sought out depot for its unique capabilities.	$5.3 million
Direct sale/teaming–Depot repairs power units providing repair facilities, skilled labor, support equipment, production engineering, and logistics support. Contractor provides failed power units, spare parts, engineering support, inventory management, and packaging and shipping.			
F/A-18E/F Integrated Readiness Support Teaming (2001)	Boeing	To meet new weapon system title 10 core depot maintenance requirements.	$885,000
Direct sale/teaming–Depot repairs components providing touch labor and depot maintenance logistics support. Contractor provides overall program execution, and customer and engineering support.			
AV-8B Remanufacture Program (1996)	Boeing	Program manager directed work share.	$6.5 million
Work share–Depot disassembles the AV-8B aircraft, repairs and/or modifies 287 components, and ships repaired components to contractor. Contractor installs components into new fuselage and delivers remanufactured aircraft to the Navy.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
SR-61/AS-61 Blades (1999)	Aviation Blade Services	Program manager directed work share.	$22,000
Work share–Depot dynamically balances turbine engine blades providing facilities, skilled labor, and logistics support. Contractor provides unbalanced blades.			
Naval Aviation Depot Jacksonville			
LAU-7, PP-2581A/A Power Supply (2000)	Associated Aircraft Manufacturing & Sales, Inc.	Contractor sought out depot for its unique capabilities.	$7,000 [1] July 2000 through August 2001
Direct sale–Depot repaired components providing repair facilities, skilled labor, support equipment, spare parts, and technical data. Contractor provided failed components and shipping.			
Test and Repair Components on P-3, F/A-18, H-3 and H-60 (2002)	Aeronautical Systems, Inc.	Contractor sought out depot for its unique capabilities.	$27,042
Direct sale–Depot repairs components providing repair facilities, skilled labor, support equipment, and technical data. Contractor provides failed components, packaging, and shipping.			
AN/ALQ126B Countermeasures Set (2002)	BAE Systems	To satisfy title 10 core depot maintenance requirements for the workload involved and contractor sought out depot for its unique capabilities.	$771,428
Direct sale–Depot repairs components providing repair facilities, skilled labor, support equipment, and technical data; and collects and provides contractor with failure data. Contractor provides total asset management, failed components, repair parts, configuration management, technical and engineering support, and packaging and shipping; and investigates and incorporates reliability improvements.			
CF-18 Boresight (2002)	Boeing	Contractor sought out depot for its unique capabilities.	$12,000
Direct sale–Depot responsible for boresight calibration, shipment preparation, maintenance of inspection and test records, and reporting schedule and funding expenditures. Contractor responsible for inventory and asset tracking, preparation for shipping, repair parts, and technical support.			
F/A-18E/F Integrated Readiness Support Teaming (2001)	Boeing	To meet new weapon system title 10 core depot maintenance requirement.	$130,600
Direct sale–Depot repairs components providing repair facilities, skilled labor, and support equipment; and collects and provides contractor with failure data. Contractor provides total asset management, failed components, repair parts, configuration management, technical and engineering support, and packaging and shipping.			
F404 High Pressure Turbine Rotors (2001)	General Electric	Contractor sought out depot for its unique capabilities.	$350,000
Direct sale–Depot repairs components providing repair facilities, skilled labor, support equipment, and technical data; and collects and provides contractor with failure data. Contractor provides failed components, repair parts, and packaging and shipping.			
J52 Engines (2000)	General Electric	Contractor made business decision to close facility where work was previously done	$66,667
Direct sale–Depot repairs engines providing repair facilities, skilled labor, support equipment, spare parts and technical data. Contractor provides failed engines and shipping.			
Calibration, Metal Processing, and Engineering Support (2001)	Logistic Services International	Contractor sought out depot for its unique capabilities.	$61,111
Direct sale–Depot calibrates test stands, and provides metal processing and engineering support services. Contractor provides access to test stands requiring calibration and items requiring metal processing, and shipping to and from the depot.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Various F-14, EA-6B, AH-1 and F-22 Antenna and Radome Testing (2000)	Neptune Technical Services, Inc.	Contractor sought out depot for its unique capabilities.	-- [5]
Direct sale–Depot was to provide antenna and radome testing, autoclave processing, coordination of measuring machine inspection, and technical data. Contractor was to provide components for testing and shipping.			
LAU-7, AN/APG-65, and AN/ARA-48 (2002)	S&K Technologies, Inc.	Contractor sought out depot for its unique capabilities.	$81,081
Direct sale–Depot repairs components providing repair facilities, skilled labor, support equipment, and technical data. Contractor provides failed components, and packaging and shipping.			
AN/AWG-9 Fire Control Radar Components (1999)	System & Electronics, Inc.	Contractor sought out depot for its unique capabilities.	$19,000 [1] February 1999 through November 2002
Direct sale–Depot repairs components providing repair facilities, skilled labor, support equipment, and technical data. Contractor provides failed components and shipping.			
Naval Aviation Depot North Island			
F/A-18E/F Integrated Readiness Support Teaming (2001)	Boeing	To meet new weapon system title 10 core depot maintenance requirements.	$10 million
Direct sale/teaming–Depot repairs components providing touch labor, facilities, equipment, production engineering, technical data, and packaging. Contractor provides failed components, repair parts, obsolescence management, and shipping.			
Aircraft Painting (2002)	San Diego Aircraft Carrier Museum	Contractor sought out depot for its unique capabilities.	$150,000
Direct sale–Depot will paint aircraft providing touch labor, facilities and equipment. Contractor will provide ready-for-paint aircraft, specifications, and paint.			
Norfolk Naval Shipyard			
USS Enterprise Nuclear Aircraft Carrier (CVN 65) FY02 Extended Drydock Selected Restricted Availability (2001)	Northrop Grumman Newport News	Contractor sought out depot for its unique capabilities.	$4.5 million
Direct sale/government-furnished resources–Depot is providing a drydock and related facilities, and skilled labor. Contractor is providing skilled labor and overall management responsibility for this overhaul.			
USS Nimitz (CVN 68) and *USS Ronald Reagan* (CVN 76) Production Services (2000)	Northrop Grumman Newport News	Contractor sought out depot for its unique capabilities.	$1.8 million
Direct sale–Depot sold general production services–including pipefitting, sheet metal, and insulation–to contractor for these two overhauls. Contractor had overall responsibility for these overhauls.			
USS Dwight D. Eisenhower (CVN 69) and *USS Ronald Reagan* (CVN 76) Production Services (2001)	Northrop Grumman Newport News	Contractor sought out depot for its unique capabilities.	$440,000
Direct sale–Depot sold general production services–including pipefitting, sheet metal, electrician, and machinist–to contractor for these two overhauls. Contractor had overall responsibility for these overhauls.			
Portsmouth Naval Shipyard			
USS Memphis (SSN 691) FY02 Selected Restricted Availability/Restricted Availability (2002)	General Dynamics	Contractor sought out depot for its unique capabilities.	$28.9 million [6] between January 2002 and December 2002
Work share/teaming–Depot is providing manpower (60 percent) and has overall responsibility for submarine overhaul. Contractor is providing manpower (40 percent) and facilities–including a drydock.			
High Performance Brush (2000)	Noesis, Inc.	Contractor sought out depot for its unique capabilities.	$486,487

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Direct sale–Depot provides equipment, technical support, and knowledge for testing services. Contractor provides program management, technical data, engineering expertise, and research and development expertise.			
Lease of Portsmouth Naval Shipyard Former Prison (1999)	Seavey Island, L.L.C.	Contractor sought out depot for its unique facility.	-- [5]
Lease–Depot provided facility. Contractor's intent was to refurbish facility and sublet as office space. Lease termination negotiations in process because of death of lessee.			
Puget Sound Naval Shipyard			
Nuclear Aircraft Carrier Maintenance Benchmarking (2001)	Todd Pacific Shipyards Corporation	Contractor sought out depot for its unique capabilities.	Partners are benefiting from improved repair processes. [5]
Teaming–The partnership's intent is to study (benchmark) similar depot and contractor processes associated with nuclear aircraft carrier overhauls, which will contribute to a mutually beneficial goal of achieving the timeliest and cost effective ship repair processes.			
Nuclear Aircraft Carrier Maintenance Work Resource Sharing (1999)	Todd Pacific Shipyards Corporation	Partnership established to gain consistent planned and anticipated workload on nuclear aircraft carriers.	-- [5]
Direct sale/government-furnished resources–Depot subcontracts segments of its aircraft carrier to contractor owing to resource shortfalls. Contractor also does this in reverse. Depot supports contractor by accomplishing work in propulsion spaces owing to security classification. Contractor supports depot by providing resources such as painters, welders, and pipe fitters.			
USS John C. Stennis (CVN 74) Planned Incremental Availability (2000)	Northrop Grumman Newport News	Contractor sought out depot for its unique capabilities.	$156,000 [1] October 2000 through November 2002
Direct sale–Depot performed work in propulsion plant owing to security classification. Contractor was responsible for overhaul.			
Explosion Bulge Plate Testing Services (2000)	Northrop Grumman Newport News	Contractor sought out depot for its unique capabilities.	$31,000 [1] October 2000 through January 2001
Direct sale/government-furnished resources–Depot provided explosion bulge testing services. Contractor provided high-strength-low-alloy plates for testing.			
Puget Sound and Pacific Railway Contract (1944)	Puget Sound and Pacific Railway	1944 triggering event is unknown.	$375,000
Government-furnished resources–Contractor allowed use of Navy owned railway in exchange for normal maintenance to rails and roadbed. Depot provides funding for major maintenance and capital improvements.			
Guided Missile Attack Submarine (Nuclear Powered) Design Conversion (2001)	Electric Boat Corporation	Contractor sought out depot for its unique capabilities.	$67,000 [1] October 2001 through November 2002
Teaming–Depot will develop work packages for installation on submarine on the basis of contractor provided conversion drawings. Contractor will also provide all standard material, engineered components, and manufactured assemblies.			
Ogden Air Logistics Center			
Composites Umbrella Agreement (2002	Alliant Techsystems	Contractor sought out depot for its unique capabilities.	-- [3]
Direct sale/work share/lease–Depot provides touch labor, nondestructive inspection, and support equipment operators. Contractor provides engineering, supply chain management, and oversight.			
Digital Analog Test Station (2002)	Westest Engineering	Contractor sought out depot for its unique capabilities.	$10 million
Work share–Test station design is a joint engineering effort between depot and contractor. Contractor will fabricate test stations. Depot and contractor will share effort to rehost software test programs on new test station.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
F-16 Block 40 Avionics Software Maintenance/ Upgrade (2001)	Lockheed Martin	Contractor sought out depot for its unique capabilities.	$610,169
Work share/government-furnished resources–Depot performs software maintenance tasks. Contractor integrates products associated with these tasks into the avionics system.			
Global Positioning System Metric Tracking Program (2002)	Boeing and TRW	Contractor sought out depot for its unique capabilities and advantageous labor rates.	$1.2 million
Work share/government-furnished resources–Depot provides labor for program installation, and share responsibility for the development of program hardware and software requirements with the contractors. Contractor provides program management and engineering support.			
Sacramento Competition Workload for KC-135 Programmed Depot Maintenance (PDM) and A-10 PDM and Commodities (1998)	Boeing	BRAC process closed a government-owned facility where work was performed.	-- [5]
Teaming–Depot performed analytical inspection and painted A-10 aircraft, overhauled components and subcontracted KC-135 PDM workload to contractor. Contractor overhauled KC-135 aircraft. The Air Force transferred the contract management out of the depot; therefore, the depot no longer considers this a partnering effort–there is no ongoing partnering interaction between the depot and the contractor.			
Intercontinental Ballistic Missile Automatic Test Systems (2001)	TRW	Program manager directed work share.	$4.1 million
Work share–Depot provides labor to replace antiquated automatic test station. Contractor maintains overarching ICBM system integration responsibilities and oversight.			
B-2 Advanced Composite (1998)	Northrop Grumman	Contractor sought out depot for its unique capabilities.	$3.0 million
Direct sale/work share/government-furnished resources–Depot provides maintenance and repair for 413 different B-2 bomber panels, doors, and surfaces. Contractor provides engineering services and technical assistance.			
Oklahoma City Air Logistics Center			
B-2 Defensive Management System Tools Program Set (1999)	Northrop Grumman	Contractor sought out depot for its advantageous labor rates.	$800,000
Work share/lease–Depot performs specified development and software maintenance tasks. Contractor maintains total system performance responsibility for this support effort.			
Propulsion Business Area partnership (1999)	Lockheed Martin	BRAC process closed a government-owned facility where work was performed.	$270 million
Teaming–Depot performs overhaul and repair of F100 engines, modules, components, and fuel accessories. Contractor performs overhaul and repair of T56 and TF59 engines, modules, components, and fuel accessories.			
F100 Engine Test Cell (2002)	Pratt and Whitney	Contractor sought out depot for its unique capabilities.	$276,933
Direct sale–Depot performs jet engine testing. Contractor provides jet engines.			
F100 Eddy Current Workload (2002)	Pratt and Whitney	Contractor sought out depot for its unique capabilities.	$697,894
Work share–Depot inspects and polishes F100 engine parts. Contractor provides F100 engine parts.			
F100 Special Technologies Coating Facility (2002)	Pratt and Whitney	Contractor made business decision to close facility where work was previously done.	$57,000
Lease–Depot provides depot space and support to contractor. Contractor performs proprietary spray coating processes in depot spray booth.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Warner Robins Air Logistics Center			
C130 Integrated Weapon System Support Program (2001)	Boeing	To meet new weapon system title 10 core depot maintenance requirements and contractor sought out depot for its unique capabilities.	$397,000
Work share/government-furnished resources–Depot provides software development and integration support for new components being added to aircraft, which increases the depot's software capabilities. Contractor maintains its overarching C-130 system integration responsibilities and oversight under the Air Force's Total Systems Support Responsibility contract; therefore, specific contractor tasks will vary depending on the specific subsystem.			
C-17 Analytical Condition Inspection (1999)	Boeing	To meet new weapon system title 10 core depot maintenance requirements and contractor sought out depot for its advantageous labor rates.	$1.6 million
Direct sale–Depot identifies hidden defects, deteriorating conditions, corrosion, fatigue, overstress, and other conditions that affect structure of C-17 aircraft. Contractor provides the depot with engineering, parts, and equipment support.			
Flexible Acquisition and Sustainment Tool (2001)	Boeing, Lockheed Martin, MTC Inc., SSAI, and SAIC	Contractor sought out depot for its unique capabilities	-- [5]
Work share–Depot will provide labor to support delivery or task orders issued to one of five contractors under the Air Force's flexible acquisition sustainment tool contract. Contractor will manage the delivery or task orders to ensure performance; however, the specific contractor tasks will vary depending on the specific delivery or task order.			
Low Altitude Navigation Targeting Infrared for Night (LANTIRN) Phase I (1997)	Lockheed Martin	Contractor made business decision to close facility where work was previously done.	$123,000
Lease–Depot provides facility where contractor repairs LANTIRN components.			
LANTIRN Phase II (2001)	Lockheed Martin	Contractor made business decision to close facility where work was previously done, and contractor sought out depot for its unique capabilities and advantageous labor rates.	$796,000
Direct sale–Depot repairs 155 different components and delivers repaired components to contractor. Contractor provides failed components for repair.			
C-130 Avionics Modernization Program (2001)	Boeing	To meet new weapon system title 10 core depot maintenance requirements and contractor sought out depot for its unique capabilities and advantageous labor rates.	$1.4 million
Work share–Depot upgraded two laboratories to accommodate testing of upgraded avionics, and provides software engineering support to rehost operational flight software into upgraded avionics. Contractor provides upgraded avionics components for testing and rehosting.			

Depot/ Partnership (year initiated)	Private-sector partner	Reason(s) for partnership	Expected annual value of work in depot
Joint Surveillance Target Attack Radar System (JSTARS) Total Systems Support Responsibility Partnership (2000)	Northrop Grumman	To satisfy title 10 core depot maintenance requirements for the workload involved.	$9.7 million
Work share–Depot performs prime mission equipment repair, system and ground support software maintenance, and various backshop functions. Contractor determines depot's work requirements, and provides depot with sustaining engineering and other support functions.			
Marine Corps Maintenance Center–Albany			
Amphibious Assault Vehicle Reliability, Availability, and Maintainability/Rebuild to Standard (1998)	United Defense Limited Partnership	Program manager directed work share.	$22 million
Work share/lease–Depot disassembles and reassembles vehicle; rebuilds transmission, electronics, generators, and other components; installs new engine; and blasts and paints vehicle. Contractor provides labor expertise and equipment to modify vehicle hulls.			
Notes			
Note 1*: No annual estimate available, but total revenue reported since partnership's inception.*			
Note 2*: Partnership involves reengineering of ongoing workload.*			
Note 3*: Partnership is in initial phase of development and implementation, and depot work has not yet begun – no annual estimate yet available.*			
Note 4*: Partnership completed and total revenue generated.*			
Note 5*: Although depot initially expected workload from this partnership, none has materialized and none is currently expected.*			
Note 6*: Partnership expected to generate total listed.*			

TABLE A-1: DEPOT MAINTENANCE PUBLIC-PRIVATE

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[i] Department of Navy Performance Based Logistics Briefing, Captain Mike Ahern, DASN(L) Deputy.

[ii] Product Support for the 21st Century: A Program Manager's Guide to Buying Performance," November 2001.
http://www.acq-ref.navy.mil/reflib/1101pblguide.pdf

[iii] Department of Navy Performance Based Logistics Briefing, Captain Mike Ahern, DASN(L) Deputy.

[iv] DAU Roadshow, Huntsville, AL. http://acc.dau.mil/

[v] Lawther, Wendell C., 2002, "Contracting for the 21st Century: A Partnership Model." The PricewaterhouseCoopers Endowment for The Business of Government.

[vi] Lawther, Wendell C., 2002, "Contracting for the 21st Century: A Partnership Model." The PricewaterhouseCoopers Endowment for The Business of Government.

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