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Committee on Armed Services,
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DEFENSE MANAGEMENT

Opportunities to Enhance the Implementation of Performance-Based Logistics



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Highlights of [GAO-04-715](#), a report to the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate

Why GAO Did This Study

The Department of Defense (DOD) is pursuing a policy that promotes performance-based logistics at the platform level as the preferred product support strategy for its weapon systems, based in part on DOD's perception that this is an industry best practice. GAO was asked to compare industry practices for activities using complex and costly equipment with life-cycle management issues similar to those of military systems to identify lessons learned that can be useful to DOD. This is the first of two reports addressing DOD's implementation of performance-based logistics and is intended to facilitate DOD's development of new guidance on the use of this approach.

What GAO Recommends

GAO recommends that DOD (1) revise its policy and guidance to the services to reflect the industry practice of using performance-based logistics as a tool to achieve economies at the subsystem or component level, rather than at the platform-level, and (2) provide for sufficient technical data to support alternative support options using either the public or the private sector. DOD concurred with our recommendations, noting that it would re-emphasize via policy and training the use of performance-based logistics at the subsystem level and take steps to update acquisition policy to include guidance on purchasing rights or long-term access to technical data.

www.gao.gov/cgi-bin/getrpt?GAO-04-715.

To view the full product, including the scope and methodology, click on the link above. For more information, contact William M. Solis at (202) 512-8365 or solisw@gao.gov.

DEFENSE MANAGEMENT

Opportunities to Enhance the Implementation of Performance-Based Logistics

What GAO Found

DOD's current policy for implementing performance-based logistics as a preferred support approach at the weapon system platform level does not reflect the practices of private-sector companies that support expensive and complex equipment with life-cycle management issues. The companies GAO interviewed use performance-based contracting as a tool rather than as a preferred support concept at the weapon system platform level. While 7 of the 14 companies GAO interviewed use some type of performance-based contracting, they use it at the subsystem or component level—for commodities such as engines, wheels, and brakes—when it is cost-effective and reduces risk in a noncompetitive environment. DOD's proposed policy of pursuing performance-based logistics as the preferred support approach at the platform level results in contracting out the program-integration function—a core process the private-sector firms consider integral to successful business operations. Further, this proposed policy could limit opportunities to take advantage of competition when it is available for subsystems or components as well as limit opportunities to gain purchasing power from volume discounts on components across an entire fleet and avoid the administrative costs charged by a prime integrator.

While DOD is proposing the aggressive use of performance-based logistics on both older and new weapon system platforms, the companies GAO interviewed use performance-based contracting at the subsystem or component level when it is cost-effective—often in a noncompetitive environment when the manufacturer controls expensive repair parts, such as engines. In general company officials said they rely more widely on other contracting vehicles, such as time and material contracts, particularly for new systems. Company officials noted that in the absence of accurate and reliable information on system performance to establish a baseline for evaluating the cost-effectiveness of a performance-based contract for new systems, the risk of the negotiated price's being excessive is increased.

The companies GAO interviewed also emphasized the importance of having rights to the technical data—such as maintenance drawings, specifications, and tolerances—needed to support the management of all logistics contracts and, should the service provider arrangements fail, to support competition among alternate providers. In contrast, DOD program managers often opt to spend limited acquisition dollars on increased weapon system capability rather than on rights to the technical data—thus limiting their flexibility to perform work in-house or to support alternate source development should contractual arrangements fail.

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APU	auxiliary power unit
DOD	Department of Defense

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Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

August 16, 2004

The Honorable John Ensign
Chairman
The Honorable Daniel Akaka
Ranking Minority Member
Subcommittee on Readiness and Management Support
Committee on Armed Services
United States Senate

In the past 4 to 5 years, the Department of Defense (DOD) has taken steps to manage the total life-cycle support costs of its weapon systems and to improve logistics support to the warfighter by reengineering its processes for both acquiring and sustaining weapon systems. As part of these reengineered processes, DOD has directed weapon system program managers to develop acquisition strategies that maximize competition, innovation, and interoperability and to capitalize on commercial technologies to reduce costs. Within the area of weapon system sustainment, DOD is pursuing a policy to implement a concept it calls performance-based logistics as the preferred support strategy for DOD weapon systems. This concept is a variation on other contractor logistics support strategies calling for long-term support of military systems by the systems' manufacturers.¹ The concept involves defining a level of performance for a weapon system already fielded or about to be fielded that is to be achieved over a fixed period of time for a fixed level of annual funding. More recently, in February 2004, the Deputy Secretary of Defense issued a memorandum promoting a more aggressive implementation of performance-based logistics that was in part based on the perception that this is an industry best practice.

As requested, we are reviewing DOD's process of implementing performance-based logistics as the preferred support strategy for its weapon systems. As a part of this review we determined what types of contractor logistics support arrangements the private sector uses for activities that have complex and costly equipment with life-cycle management issues similar to those of military systems, and what

¹ There is a performance-based logistics agreement between the program office and the Tobyhanna Army Depot to support the Common Ground Station.

potential lessons can be learned from a comparison between private-sector contractor support practices and the contractor logistics support practices DOD is urging the services to implement. While conducting our work, we learned that DOD soon will be issuing additional policy guidance on its use of performance-based logistics. This is the first of two GAO reports addressing DOD's implementation of performance-based logistics and is intended to provide the Secretary of Defense with recommendations that should facilitate DOD's development of new guidance. Our follow-on report in early 2005 will determine similarities and differences in the way the identified DOD programs are structured and managed, identify approaches that appear to offer the greatest opportunities to achieve cost effectiveness, and evaluate the demonstrated cost savings or improved responsiveness of the new DOD concept.

As a part of this review, we examined Office of the Secretary of Defense and service policies and guidance; collected data on performance-based logistics programs identified by the services; and conducted case studies on a limited number of the programs. We also reviewed the logistics-contracting practices of 14 private-sector companies from the air carrier, maritime shipping, energy exploration, mining, and entertainment industries—companies that use complex and costly equipment with life-cycle issues similar to those of military weapon systems and that are motivated by the desire to minimize costs and maximize profits to choose the most cost-effective option.² We held group discussions covering standard questions about the industries' contractor logistics support practices, and we compared the results of these interviews with the preliminary information obtained from our analyses of DOD policies and programs. We reviewed the reliability of the projected cost and savings data used in this report and determined that it was sufficient for our purposes. We performed our work from September 2003 through June 2004 in accordance with generally accepted government auditing standards. The scope and methodology section contains more detailed information about the work we performed.

² This equipment includes airline and air cargo aircraft, cruise ships and oil tankers, heavy mining equipment, offshore drilling and production platforms, and unique electronic equipment.

Results in Brief

DOD's current policy for implementing performance-based logistics as a preferred support approach at the weapon system platform level does not reflect the practices of private-sector companies that support expensive and complex equipment with life-cycle management issues. A Deputy Secretary of Defense memorandum to the services cites the private sector's use of performance-based logistics as the basis for aggressively pursuing this concept. Private-sector companies we interviewed having complex and expensive assets with life-cycle issues similar to those of military weapon systems do not use performance-based contracting this way. Although 7 of the 14 companies we interviewed use some type of performance-based contracting, they use it at the subsystem or component level, when it is cost-effective and reduces risk in a noncompetitive environment. The companies rely more widely on other contracting methods to benefit from competition for those subsystems or components where it is practicable. DOD's approach supports aggressive implementation of performance-based logistics at the weapon system platform level and for new as well as older systems. As a result, DOD's proposed approach to implementing performance-based logistics could limit opportunities for achieving cost savings from competition, volume discounts, and reduced administrative costs. Further, it could result in the contracting out of the program-integration function—a core process that the private-sector firms consider integral to successful business operations. Private-sector company officials we interviewed reported that their firms use the following approaches:

- Use performance-based contracting selectively when it is cost-effective—often in a noncompetitive environment when the manufacturer controls expensive repair parts, such as engines. In general, company officials said they rely more widely on other contracting vehicles, such as time and material contracts, particularly for newer systems that don't have a performance history. DOD's approach, in contrast, proposes aggressive implementation of performance-based contracts on both older and newer weapon systems. Company representatives emphasized that in the absence of accurate and reliable information on system performance to establish a baseline for evaluating the cost-effectiveness of a performance-based contract for new systems, the risk of the negotiated price being excessive is increased.
- Use performance-based logistics at the subsystem or component level, such as for engines; DOD's approach, in contrast, proposes to support implementation at the weapon system platform level, such as was tried for the T-45 trainer aircraft. We found no private-sector performance-based contracts being used at the platform level. The company representatives preferred to retain the program integration function that they consider a

core function essential to the success of their business operations. Additionally, they prefer to (1) take advantage of competition when it is available for subsystems or components, (2) gain purchasing power from volume discounts on subsystems or components across their entire fleet, and (3) avoid the administrative costs that would be charged by a prime integrator. Indeed, Navy officials told us that the T-45 platform level performance-based logistics contract resulted in their paying the contractor for hours that the Navy did not fly and that the contract was not cost-effective. But by dividing the airframe and engine into separate contracts, adding a sortie completion metric, and competing the airframe workload, the Navy projects that savings of \$144 million (\$118 for the airframe and \$26 million for the engine) can be achieved over 5 years.

- Emphasize the importance of having rights to the technical data needed to support the management of all logistics contracts—such as detailed maintenance drawings, specifications, and tolerances—and, should the companies' service provider arrangements fail, to support competition among alternate providers. DOD program managers, in contrast, often opt to spend limited acquisition dollars on increased weapon system capability rather than on the rights to technical data. This trade-off limits DOD's flexibility, because although DOD may be obtaining access to technical data needed to manage performance-based contracts, it may not be developing product-support strategies that provide for the future delivery of technical data when required to support competition or alternate source development if performance-based logistics arrangements were to fail.

We are making recommendations that, if followed and included in the soon to be issued guidance, should improve the implementation of performance-based logistics in the department. In commenting on a draft of this report, DOD concurred with our findings and recommendations. DOD's response is included as appendix I.

Background

Performance-based logistics is the DOD term for the process of (1) identifying a level of performance required by the warfighter and (2) negotiating a performance-based contract between the government and the product support integrator—that is generally the original equipment manufacturer of the total system—to provide long-term total system support for a weapon system at a fixed level of annual funding. Instead of buying spares, repairs, tools, and data in individual transactions, the method in a performance-based logistics arrangement is to buy a predetermined level of availability that meets the warfighter's objectives. To implement performance-based logistics, DOD selects a product support integrator to serve as the single point of accountability, integrating support from all sources to achieve the performance outcome metrics specified

in the performance-based support agreement. The metrics used include operational availability (a measure of the degree to which an item is in an operable state and can be committed at the start of a mission when the mission is called for at an unknown point in time); mission capability (the material condition, indicating that it can perform at least one and potentially all of its designated missions); and customer wait time (the total elapsed time between issuance of a customer order and fulfillment of that order). For example, the Navy now uses two metrics for its performance-based contract for the T-45 aircraft system³—“ready for training,” which requires that the contractor have a minimum number of aircraft ready for training at 7:00 AM each business day in order to achieve a 57 percent aircraft availability; and “sortie completion,” which requires that the contractor meet 98 percent of the requirements for the scheduled training flights. As an incentive, the contract pays a performance bonus (maximum of \$5 million annually) if the contractor exceeds the performance metrics. If the contractor only meets—or fails to meet—the minimum metrics, the contractor then receives none of the annual performance bonus.

DOD Directive 5000.1, the Defense Acquisition System, highlights the department’s preference for using performance-based logistics at the platform level, stating, “Program Managers shall develop and implement performance-based logistics strategies that optimize total system availability while minimizing cost and logistics footprint.” As part of its implementation of this strategy, in 2003 DOD proposed that the Congress adopt legislative changes that would allow the services to increase the appropriations allocation flexibility within a weapon system program, allowing the program manager to use funds from different accounts (such as operation and maintenance; research, development, test, and evaluation; and procurement) to pay for system support costs. Although this proposal was not adopted, DOD continues to pursue various avenues that would support the overall objective of having greater flexibility by using a single line of support funding managed by the program office for total system operation and maintenance costs. Most recently, on

³ Initially the Navy had one contract for the entire T-45 aircraft system and had only one metric, aircraft availability, for evaluating the contract. Under this approach the Navy was paying the contractor based on its forecasted flying hours rather than actual hours. Because forecasted hours were more than actual hours, the Navy paid for hours it was not flying. The Navy added the second metric and a fixed labor rate for over-and-above work when it revised the T-45 performance approach and negotiated separate contracts for the aircraft and engine systems.

February 4, 2004, the Deputy Secretary of Defense (1) directed the Under Secretary of Defense (Acquisition, Technology, and Logistics) in conjunction with the Under Secretary of Defense (Comptroller) to issue clear guidance on purchasing using performance criteria; and (2) directed each service to provide a plan to aggressively implement performance-based logistics, including transferring appropriate funding as needed,⁴ on current and planned weapon system platforms for fiscal years 2006–2009.

While this directive does not preclude the services from using performance-based logistics contracts below the platform level, it does express DOD's intent to apply the concept at the platform level as a preferred practice. As we discuss in the next section, DOD has established separate goals for implementing performance-based service contracts, and the services have identified many contracts as performance-based logistics arrangements that are, in fact, below the platform level. However, according to Office of Secretary of Defense officials, DOD would like to implement performance-based logistics at the platform level to move from contracting for material availability to weapon system availability. DOD considers that the platform level offers the metrics needed to implement a true performance-based logistics arrangement.

DOD Performance-Based Logistics Evolving from Its Use of Performance-Based Service Contracting

The Office of Management and Budget indicates that performance-based service contracting, from which performance-based logistics has evolved, has been referenced in regulation, guidance, and policy for more than two decades, and federal agencies have used performance-based contracting to varying degrees for acquiring a range of services. In 1991 the Office of Management and Budget issued a policy letter establishing the use of a performance-based approach for service contracting, and in 1994 it initiated a governmentwide pilot project to encourage the use of performance-based service contracts in federal agencies, including DOD.

⁴ DOD officials suggest this might involve establishing a single line of accounting for all operations and maintenance funding for a program that would be managed by the system program office. Today, operation and maintenance funds are managed by different parties including the operational commands, the weapon system managers, and the program offices. We have previously reported that warfighters have expressed a concern about the loss of flexibility of operational commanders when system operation and maintenance funding is fenced and controlled by the program manager. See U.S. General Accounting Office, *Defense Logistics: Air Force Lacks Data to Assess Contractor Logistics Support Approaches*, [GAO-01-618](#) (Washington, D.C.: Sept. 7, 2001) and *Defense Logistics: Opportunities to Improve the Army's and Navy's Decision-making Process for Weapons Systems Support*, [GAO-02-306](#) (Washington, D.C.: Feb. 28, 2002).

The use of performance-based service contracts to acquire services offers a number of potential benefits, particularly when services are acquired by means of a fixed price agreement. Performance-based contracts can encourage contractors to be innovative and to find cost-effective ways of delivering services for a fixed level of funding. By shifting the focus from process to results, these contracts can potentially produce better outcomes and reduced costs.

In view of the potential benefits, Congress has been encouraging greater use of performance-based service contracting.⁵ In an August 2003 memorandum to the military departments, the Under Secretary of Defense (Acquisition, Technology and Logistics) stated that DOD should continue to increase its use of performance-based service acquisitions. He noted that DOD has a goal to award 50 percent of contract actions and dollars using performance-based specifications by fiscal year 2005.

The more specific concept of performance-based logistics as an approach for supporting military systems emerged from DOD's 1999 study, *Product Support for the 21st Century*, which identified 30 pilot programs (10 in each military department) to test logistics support reengineering concepts that placed greater reliance on the private sector. Many of the pilots involved various types of contractor logistics support, prime vendor support, or performance-based type arrangements. Others focused on including reduced operation and support costs and improved readiness as performance requirements for new system development.⁶ The September 30, 2001, Quadrennial Defense Review advanced DOD's move toward this concept by advocating the implementation of performance-based logistics with appropriate metrics that would be designed to compress the supply chain and improve the readiness of major weapon systems and commodities.⁷ A November 2001 Office of the

⁵ In October 2000, Congress passed section 821 (b) of the National Defense Authorization Act for Fiscal Year 2001, which allows DOD to treat performance-based service contracts or task orders as contracts for the procurement of commercial items under certain conditions (Public Law No. 106-398).

⁶ U.S. General Accounting Office, *Best Practices: Setting Requirements Differently Could Reduce Total Ownership Costs*, GAO-03-57 (Washington, D.C.: Feb. 11, 2003), emphasized the need to include total ownership cost goals and readiness rates as performance metrics equal to any others in the development of major weapon systems.

⁷ Supply chain management refers to all of the inter-related components and processes required to ensure that the correct amount of product is in the correct location at the right time and at the lowest cost.

Deputy Under Secretary of Defense document, *Product Support for the 21st Century: A Program Manager's Guide to Buying Performance*, intended as a guide for program managers, stated that program managers will implement performance-based logistics on all new systems and on acquisition category I and II fielded systems selected on the basis of a sound business case.

It is unclear how many performance-based logistics programs the services have implemented. In response to our inquiries, the Army identified 74 performance-based logistics programs, the Navy identified 106, the Air Force 4, and the Marine Corps 1. We noted a broad range of contract arrangements is identified under the performance-based logistics umbrella, with many of them initiated under a different name, such as contractor logistics support or total systems support responsibility and later identified as performance-based logistics arrangements. Most of the DOD performance-based logistics arrangements currently identified by the services are used for subsystems or components rather than for weapon system platforms.

Fiscal years 2003 to 2007 Defense Planning Guidance required the services to submit plans that identified their implementation schedules for performance-based logistics to all new weapon systems and acquisition category I and II fielded systems. Similarly, a February 13, 2002, letter from the Under Secretary of Defense (Acquisition, Technology, and Logistics) to the services emphasized the need for the plans required by the Defense Planning Guidance and directed that the plans be issued by May 1, 2002.

But although the services issued plans, they did not take an aggressive approach toward adopting this concept, according to Office of Secretary of Defense logistics officials. An October 2003 Defense Business Board report encouraged the department to move more quickly in adopting the performance-based logistics, stating, "Performance-based logistics is an industry best practice and a DOD best practice. DOD should consider using it for all its weapon systems, new and legacy, provided it is supported by a business-case analysis."⁸ This task force was chartered by the Under Secretary of Defense (Comptroller) and Chief Financial Officer to describe private-sector best practices used in managing supply chain

⁸ The Supply Chain/Performance-Based Logistics Task Group's October 15, 2003, report to the Senior Executive Council provided this group's perspective regarding what needed to be done to implement performance-based logistics in the Department of Defense.

partnering arrangements and to propose how to apply such practices to the supply chain processes used by DOD. Citing this task force report, the aforementioned February 2004 Deputy Secretary of Defense memorandum to the military departments stated, “Delay in implementing this practice complicates our funding, limits industry flexibility, and increases DOD inventory. We must streamline our contracting and financing mechanisms aggressively to buy availability and readiness measured by performance criteria.”⁹

DOD’s Current Preferred Approach to Performance-Based Logistics May Limit Opportunities for Competition and Savings

Because DOD proposes using performance-based logistics at the platform level as the predominant support strategy for its military systems, it may limit opportunities for savings from competition, volume discounts, and reduced administrative costs. Also, by often not contracting for long-term access to technical data, programs officials are further limiting their support options.

In the private sector, performance-based contracting is a tool used according to the applicability of subsystem or component and circumstance, when it is cost-effective and reduces risk in a noncompetitive environment. DOD, by contrast, proposes using it as the predominant product support strategy for its military systems. Further, when private-sector companies use performance-based contracting, they use it at the subsystem or component level, retaining the program integration function themselves as a core business function essential to successful business operations. Conversely, DOD policy memoranda support using performance-based contracting at the platform level and using the contractor as the support integrator. Moreover, private sector companies emphasize the importance of having the rights to contracts and competition. DOD, in contrast, is frequently not acquiring the same level of technical data in its acquisition of new programs.

⁹ Memorandum from the Deputy Secretary of Defense to the Secretaries of the Military Departments and the Under Secretary of Defense (Comptroller), February 4, 2004.

Performance-Based Contracting for Logistics Used as a Tool in Industry Rather Than a Preferred Support Concept as Proposed by DOD

While our review of private sector companies did find that half of those we interviewed are using performance-based contracting, the industry approach is much different from DOD's preferred approach for performance-based logistics. As previously discussed, Office of the Secretary of Defense guidance has over the past several years encouraged the services to use performance-based logistics at the weapon system level as the preferred approach for life-cycle management of military systems. DOD officials have stated that this is an industry best practice and should be adopted more aggressively, but in 7 of 14 companies we interviewed that used some type of performance-based contracting, this agreement was used at the subsystem or component level—that is, for engines, auxiliary power units, wheels, or brakes— and it was generally used for older systems.

The following chart characterizes the companies we interviewed by industry type, by the extent to which they outsource logistics support activities, by the predominant contracting practices used, and by the types of subsystems or components outsourced using performance-based contracting. Pseudonyms are used rather than the actual company names. These companies generate annual revenue generally exceeding \$1 billion, and they use complex and expensive equipment for which they require high levels of availability and reliability as well as efficiency in managing lifecycle costs. The life-cycle management issues are comparable to those of DOD in managing its weapon system sustainment programs.

Table 1: Company Use of Contracting Tools to Outsource Subsystem and Component Support

Industry/company	Percent outsourced	Predominate type of contracting tool	Subsystem or component outsourced
Air carrier industry			
Company A	65	Fixed price—time and material	Airframes
		Performance-based	Engines, auxiliary power units (APUs), avionics, wheels and brakes
Company B	20	Fixed price—time and material	Airframe, engines, avionics
		Performance-based	APUs, avionics, wheels and brakes
Company C	38	Fixed price—time and material	Engines
		Performance-based	Engines, APUs
Company D	90	Fixed price—time and material	Airframes, engines, APUs, avionics
		Performance-based	Engines, avionics, wheels and brakes
Company E	76	Fixed price—time and material	Airframes, engines, avionics
		Performance-based	Engines, APUs, wheels and brakes
Company F	33	Fixed price—time and material	Airframes, engines, APUs, avionics
		Performance-based	Engines, APUs, brakes
Energy exploration and mining industries			
Company G	75	Fixed price—time and material	Engines
		Performance-based	Engines, transmission, torque converters, wheels and brakes
Company H	5	Fixed price—time and material	All components
Company I	65	Fixed price—time and material	Engines, pumps
Company J	65	Fixed price—time and material	Engines, hydraulics, pumps, transmissions
Maritime and entertainment industries			
Company K	75	Fixed price—time and material	Subsystems/components
Company L	75	Fixed price—time and material	Subsystems/components
Company M	35	Fixed price—time and material	Subsystems/components
Company N	20	Fixed price—time and material	Subsystems/components

Source: GAO analysis of company data.

As shown above, performance-based contracting in the companies we interviewed is most widely used in the air carrier industry, and it also has limited use in the energy exploration and mining industry. According to air carrier officials, time and material contracts are more prevalent than performance contracts, because industry prefers to use short-term (2 to 3 years) competitive contracts when possible. In a sole-source environment companies sometimes use longer-term (10 to 12 years)

performance-based contracts for supporting some subsystems such as engines, if they have sufficient historical data to establish an accurate baseline. For example, all but one of the air carrier industry companies had performance-based contracts for one or more engines. The amount of engine workload managed by performance-based contracts varied from company to company. For example, Company C, which outsourced 38 percent of its total maintenance workload, used performance-based contracts for one-fifth of its outsourced engine work; while Company A, which outsourced 65 percent of its maintenance workload, used performance-based contracts for all of its engine work. The air carrier companies did not use performance-based contracts for contracted work on airframes, work that generally comprises about 30 percent of the commercial aviation maintenance and repair market.¹⁰ Table 2 provides information regarding the percentage of dollars spent on the repair of each type of subsystem or component managed using performance-based contracts by the air carrier companies and the one non-air carrier company that used performance-based contracts. The subsystems or components for which the companies used performance-based contracts most widely were auxiliary power units and wheels and brakes.

Table 2: Percentage of Maintenance Dollars for Outsourced Subsystems and Components Managed Using Performance-Based Contracts

Out sourced subsystems and components	Companies						
	A	B	C	D	E	F	G
Engines	100%	0%	20%	90%	57%	28%	45%
Auxiliary power units	90	100	100	0	100	41	N/A
Avionics	36	35	0	5	0	0	N/A
Wheels and brakes	100	100	0	100	100	80 ^a	25
Transmission and torque converters	N/A	N/A	N/A	N/A	N/A	N/A	100

Source: GAO analysis of company data.

Note: N/A = Not applicable because some subsystems and components are not applicable to all industries.

^aIncludes only brakes. Wheels are maintained in-house.

¹⁰ Additionally, 29 percent of the total is for engines, 23 percent for line maintenance, and 19 percent for components.

Company officials noted that performance-based contracts are a tool most often used selectively in a noncompetitive environment in an effort to control cost and reduce risk. Additionally, they said that performance-based contracting works better for subsystems and components where available cost and performance data are sufficient to establish a good business case analysis, noting that this is more difficult to accomplish for new systems, where performance data are uncertain. Performance-based contracts differ from traditional logistics contracts by focusing on the purchase of weapon system sustainment as an integrated package based on output measures—such as a predetermined level of system availability. In contrast, traditional transaction-based time and material contracts are used to purchase logistics inputs—such as quantities of spare parts, specific repair tasks, and engineering studies. Under transaction-based contracts, the government pays for each transaction as a separate deliverable; whereas under a performance-based contract, the contractor is being paid for achieving an outcome performance metric, regardless of what he does to achieve that performance.

In concept, performance-based contracts encourage the contractor to achieve a high level of performance at a fixed cost. However, air carrier industry officials we interviewed said that entering into a performance-based contract without good baseline data introduces a higher level of risk that the arrangement may not be cost-effective. For example, officials from one company said they used a performance-based contract for the older of the two types of engines in the company's inventory. Officials said they would wait to collect sufficient performance data on the newer engine before considering a performance-based contract. The officials noted that they had originally used a performance-based contract on the newer engine, but found that, because the reliability of the engine was greater than expected, the contract arrangement was not cost-effective. The company was able to change the contract to a time and material contract, to allow time to collect sufficient performance data to support a fact-based business case analysis to determine the company's "should" cost amount for a performance-based contract.

Performance-based contracting offers DOD opportunities to provide contractors incentives to achieve desired levels of operational performance at a fixed cost when the department has historical performance information. But in the absence of reliable and complete performance data as a baseline, the adoption of this approach as the preferred support strategy for new weapon systems could undermine DOD's ability to negotiate cost-effective terms—particularly since the performance-based contracts at the weapon system level have

cost-reimbursement elements, while the private-sector companies generally used fixed-price agreements. Private-sector officials noted that it is important to use fixed prices for materials, since the high price of materials is a key factor driving the companies to use performance-based contracts.

Private Sector Applies Performance-Based Logistics at the Subsystem or Component Level Rather Than at the Platform Level and Retains System Integrator Function

DOD policy promotes using performance-based contracting differently from the way private-sector firms use it in supporting complex and expensive systems. The companies we reviewed generally used performance-based contracting at the subsystem level for engines and certain other components rather than at the platform level, as proposed by DOD. Furthermore, when using performance-based contracting, these companies do not contract out the program integration function, as the military services are doing.

We found no performance-based contracts for maintenance of airframes or maintenance of any equipment platform among the private-sector companies we reviewed. Industry officials cited three reasons why they believe the use of performance contracts is more advantageous at the subsystem or component level. First, they prefer to take advantage of competition whenever it is available and to manage support contracts through the use of competitive procedures. For example, because airframe maintenance support is available from a competitive market, the companies generally use a combination of fixed price and time and material contracts for this category of service. Conversely, performance-based contracts are often used for engine repair because of the high cost of spare and repair parts that are available only from the original equipment manufacturer. Officials said that there are too few third-party repair vendors to foster competition. Second, company officials emphasized the importance of gaining purchasing power from volume discounts on subsystems or components across their entire fleet of systems as a reason for not implementing performance contracting at the platform level. Finally, by having contracts at the subsystem or component level, companies can avoid the administrative costs that would be charged by a prime integrator.

Similar to the approach used by the companies we reviewed, we noted that the Navy has used performance-based contracts primarily at the subsystem or component level. Navy officials said that implementation at this level is easier because the service could implement this concept more readily under DOD's current funding structure. The funding is handled through the working capital fund, with reimbursement to the fund coming

from the sale of subsystems or components to the fleet. Navy officials also noted that by implementing performance-based logistics at this level, they can save money by competing subsystems or components where a competitive market exists, consolidating the requirements of multiple programs and leveraging their buying power to obtain a pricing advantage, and reducing administrative costs—advantages also recognized by the private sector.

The Navy's history of using a performance-based contract for logistics support of the T-45 trainer aircraft illustrates how savings may be achieved by implementing the concept at the subsystem level rather than the weapon system level. The program office originally had a performance-based contract for the entire weapon system with the original equipment manufacturer. The contract was a 5-year firm-fixed price with an option for a sixth year period. Program office officials said the sole metric used, ready-for-training aircraft, resulted in there being an insufficient number of aircraft available to fly scheduled training sorties. Additionally, because actual flying hours were fewer than forecasted, the Navy was paying for flying hours it was not flying. Concluding that benefits weren't as expected, that the costs were too high, and that savings were achievable by negotiating separate contracts for the airframe and engine, the program office chose not to exercise the option. The new engine contract is a performance-based contract awarded on a sole-source basis to the engine manufacturer, and the airframe performance-based contract was awarded competitively. According to Navy program office officials, the revised approach resulted in a projected savings of \$37 million in the first year and projected savings of \$144 million at the end of a 5-year period.¹¹ The savings are being achieved through elimination of the administrative costs charged by the prime contractor for the engine work and through competition for the aircraft system.

Another potential adverse effect of awarding a performance-based contract at the weapon system level is the loss of management control and expertise over the system that private-sector firms said was essential to

¹¹ The savings estimates were calculated independent of the program office by the Naval Air System Command's cost estimators within the Research and Engineering Competency, and they follow a standard methodology called the "Maintenance and Trade Analysis." A baseline was established by updating the original baseline cost analysis supporting the initial contract with actual costs from the 2001 through 2004. The calculation also quantified the pass-through administrative cost charged by the prime contractor for the engine work. This analysis identified that the Navy would save \$118 million on the new competitively awarded airframe contract and \$26 million on the new engine contract.

the success of their business operations. Industry officials said that managing their supplier base and ensuring the availability of their equipment to generate revenue is too critical to entrust to a second party. Further, they believe that contracting out support at a platform level by using a system integrator limits the potential to optimize savings through competition and volume discounts and adds administrative costs charged by the prime integrator for managing subcontractors.

Not Obtaining Sufficient Rights to Technical Data Could Limit Long-Term Support Options and Could Increase Long-Term Costs

The spokespersons for every company we visited told us that when they purchase equipment they make sure to acquire the technical data¹² necessary to support it, regardless of whether the company intends to support the equipment in-house or outsource some of its support operations. Company officials said that this data was essential to their own management and oversight functions. For example, officials from a company that outsources most of its repairs pointed out that its engineers use the data to perform such tasks as establishing reliability metrics, evaluating performance, and revising repair standards. Additionally, officials stated that owning the technical data afforded their companies the flexibility that enabled them either to perform the work in-house or to offer the work up for competition. Several company officials said that it is best to obtain the technical data at the time the equipment is purchased, when the buyer has the most leverage in its negotiations with the manufacturer. Trying to obtain the technical data at a later time is difficult to negotiate and more expensive. These companies do not price their technical data items separately. DOD program offices, however, negotiate a price for maintenance-and-repair technical data separately from the price of the military hardware systems. According to service competition-advocate officials, program managers faced with limited acquisition dollars often make trade-off decisions to buy increased weapon system capability in lieu of technical data.

We reported in 2002 that DOD program offices have often failed to put adequate emphasis on obtaining needed technical data during the acquisition process.¹³ We recommended that DOD emphasize the

¹² Technical data includes detail maintenance drawings and repair publications containing specifications and tolerances.

¹³ U.S. General Accounting Office, *Defense Logistics: Opportunities to Improve the Army's and Navy's Decision-making Process for Weapons Systems Support*, [GAO-02-306](#) (Washington, D.C.: Feb. 28, 2002).

importance of obtaining technical data and consider including a priced option for the purchase of technical data when considering proposals for new weapon systems or modifications to existing systems. DOD concurred with our recommendation, noting that there was a requirement in DOD 5000.2R for program offices to provide long-term access to data required for the competitive sourcing of systems support throughout the life cycle. Additionally, by implementing total life-cycle systems management, DOD would strengthen its emphasis on acquiring technical data when negotiating support agreements with logistics providers. Nonetheless, the DOD has further diminished the emphasis it places on the need to acquire rights to technical data. For example, in May 2003, DOD replaced its acquisition regulation with a streamlined instruction,¹⁴ which eliminated the prior regulation's requirement for the program manager to provide for long-term access to data required for the competitive sourcing of weapon system support throughout the life cycle of the system. This language is now provided as guidance in the *Interim Defense Acquisition Guidebook*, but it is not mandatory that this guidance be followed.

According to DOD and service logistics officials, program managers should develop strategies that provide the government with sufficient and affordable technical data rights to enable them to put the work out for competition or develop alternate public or private sources for weapon system support if performance-based logistics arrangements fail or become too expensive. Logistics officials recognize that program managers who implement performance-based logistics contracts on new weapon systems may wish to delay taking delivery of technical data early in the life of the system, because unlike the stable designs of commercial equipment purchased in the private sector, the data for cutting edge technology lacks maturity and is frequently changed. Alternatively, program managers sometimes pay the original equipment manufacturers both to maintain the technical and weapon system configuration data and to provide the program managers with sufficient access to enable them to manage and oversee the performance-based logistics contract. However, logistics officials agree that the product support strategy should clearly provide for the future delivery of the technical data when required to support competition or alternative source development.

¹⁴ DOD Regulation 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System Acquisition Programs* was replaced by DOD instruction 5000.2, *Operation of the Defense Acquisition System*, to create a simplified and flexible management framework for acquisition.

Service logistics and competition-advocate officials said that it is critical that this strategy be developed during the weapon system acquisition phase, when the program office has its greatest leverage in negotiating the price of the technical data and the conditions under which the manufacturer must deliver the data. For example, in the course of the acquisition of the V-22 aircraft engine, the Navy program office obtained a technical data license agreement, according to which the manufacturer agreed to deliver a complete data package if it failed to perform in compliance with the statement of work at the agreed-to price and schedule. Conversely, when the program office does not obtain the technical data at the time of purchase, the future costs for obtaining these data are not knowable and, without the leverage of the original package purchase, could be prohibitively expensive. In our review of data collected from DOD's performance-based logistics program offices, we noted that DOD had not negotiated for the maintenance drawing packages for the Javelin missile, F-117 aircraft, and TOW missile improved target acquisition system, and DOD would have to purchase them at a later date at a price to be negotiated.

In April 2004, the Logistics Management Institute reported in a review of performance-based logistics arrangements that it found no evidence to indicate either the quantity or the quality of logistics management data—including technical data—available to the government was compromised by the use of performance-based logistics arrangements.¹⁵ This report also noted, however, that the acquisition guidance published by the Office of the Secretary of Defense does not address strategies for terminating interim contractor support or performance-based logistics contracts. The Logistics Management Institute report recommended that the Defense Acquisition Working Group include performance-based logistics “exit strategy” guidance in the defense acquisition guidebook. Nonetheless, as we have previously noted, guidance in this handbook is not mandatory.

Conclusions

The use of performance-based contracting for the support of complex and costly military systems offers opportunities for military program managers to incentivize contractors to achieve desired levels of weapon system performance. However, our review of the use of the practice in private-sector firms indicates that DOD's proposed guidance to adopt

¹⁵ Logistics Management Institute, *Visibility of Maintenance Data in Performance-Based Logistics Arrangements*, LG301L4 (McLean, Va.: Apr. 2004.)

performance-based logistics aggressively at the platform level could limit competition, and such guidance might not be the most cost-effective approach for using this concept. Additionally, although DOD based its rationale for using performance-based logistics at least partially on the perception that this is an industry best practice, it appears that perception is not the case. DOD's approach toward implementing the concept appears inconsistent with the way private-sector companies we interviewed use performance-based contracting in acquiring support for their equipment, and DOD's approach has risks that should be addressed as it develops its guidance for using performance-based logistics.

Using performance-based logistics as the preferred approach for managing the support of major weapon system programs—even though private-sector company officials use performance-based contracting selectively, when appropriate and cost-effective—carries the risk of increasing life-cycle cost. Both private- and public-sector experiences with performance-based contracting illuminate the challenges involved in developing a meaningful baseline for establishing a performance-based arrangement for new systems, because not enough is known early in the program about performance characteristics and because there is risk to both the program office and the contractor that may translate into high cost. Additionally, the use of performance-based logistics can limit the competition that would be available for providing logistics support when support decisions are made at the subsystem or component level rather than at the platform level. Using performance-based logistics at the platform level also creates risk by contracting out the program integration function—a core function that private contractors consider essential for the cost-effective management of costly and complex systems over their life cycle.

Finally, adopting performance-based logistics at the weapon system platform level may be influencing program offices to obtain access only to technical data necessary to manage the performance-based contract during the acquisition phase—and not to provide a strategy for the future delivery of technical data in case the performance-based arrangement fails. In such a case, the program manager would have limited flexibility in choosing whether to perform maintenance in-house, select an alternative vendor, or offer the work for competition.

Recommendations for Executive Action

In order for the department to improve the implementation of performance-based logistics, we recommend that the Secretary of Defense direct that the Under Secretary of Defense (Acquisition, Technology and Logistics) and the Under Secretary of Defense (Comptroller) implement the following two recommendations:

1. Incorporate in DOD's guidance to the services the private sector's practice of using performance-based logistics as a tool to achieve economies at the subsystem or component level, rather than as a preferred practice at the platform level. Also, incorporate the private sector's practice of using it when sufficient performance data are available to establish a meaningful cost baseline and
2. Consider requiring program offices, during weapon system acquisition, to develop acquisition strategies that provide for the future delivery of sufficient technical data to enable the program office to select an alternate source—public or private—or to offer the work out for competition if the performance-based arrangement fails or becomes prohibitively expensive.

Agency Comments and Our Evaluation

In commenting on a draft of this report, DOD concurred with our recommendations to enhance the implementation of performance-based logistics.

Regarding our recommendation to incorporate in its performance-based logistics guidance to the services the private sector's practice of using performance-based logistics as a tool to achieve economies at the subsystem or component level, DOD's response stated that the department recognizes the need to re-emphasize the use of performance-based logistics for subsystems and components in its policy memorandum and guide books. Nonetheless, the response noted that the department believes that it is still prudent to pursue performance-based logistics strategies at the platform level where supported by a business case analysis. The private sector companies we interviewed noted that the more cost effective alternative is to use competitive procedures where practicable at the subsystem or component level supported by a cost analysis using reliable performance data.

Regarding our comment that DOD also incorporate in its guidance the private sector practice of using performance-based logistics when sufficient performance data are available to establish a meaningful cost baseline, DOD stated that its policy is that a business case analysis should be performed to help make the determination to use performance-based logistics or traditional logistics support arrangement, and that the business case analysis incorporate the use of performance data, if available, in establishing a meaningful cost baseline. DOD stated that it will emphasize the use of performance data in a revised policy memorandum on performance-based logistics. However, based on information we obtained from the private sector companies we interviewed, developing reliable cost and performance data to support a valid cost analysis at the platform level for a new system will be a challenge and may not be reliable in identifying the most cost-effective support option over the life cycle of the system. As we noted in our report, one company tried a performance-based contract for a new engine but found that because the reliability of the engine was greater than expected, this contract management was not cost-effective. Company officials said they preferred to collect reliable performance data over a period of time to support negotiations for a performance-based contract.

In response to our recommendation to consider requiring program offices to develop acquisition strategies that provide for the future delivery of sufficient technical data to select an alternate source—public or private—or to offer the work out for competition if the performance-based arrangement fails or becomes prohibitively expensive, DOD stated that it will take steps to address this issue in the next iteration of the DOD Directive 5000.1 and DOD Instruction 5000.2 acquisition regulation policy. According to the response, the new policy will require the program manager to establish a data management strategy that requires access to the minimum data necessary to sustain the fielded system, recompute or reconstitute sustainment if necessary, promote real time access vice delivery of the data, and provide for the availability of quality data at the point of need for the intended user. According to DOD, for performance-based logistics arrangements, these actions will include acquiring the appropriate technical data to support an exit strategy should the arrangement fail or become too expensive.

Scope and Methodology

The objectives of our review were to determine (1) what types of contractor support practices the private sector used to support complex and costly equipment that have life-cycle management issues similar to military weapons systems and (2) what potential lessons could be learned through a comparison of private sector contractor logistics support practices that DOD currently uses, or plans to use, under its implementation of performance-based logistics.

To identify commercial industries that use complex and costly equipment with life-cycle management issues similar to military weapon systems, we interviewed DOD depot maintenance and logistics policy officials. We also conducted a literature search to identify appropriate industry groups and interviewed officials from the Industrial College of the Armed Forces, the Aerospace Industries Association, the American Association of Port Authorities, International Council of Cruise Lines, the Society for Mining Metallurgy and Exploration, the Construction Industry Institute, and the Council of Logistics Management to validate and refine the identified industries and to identify appropriate candidate companies within the industry groups. Within the air carrier, maritime shipping, energy exploration, mining, and entertainment industries, we identified over 250 companies and selected 67 companies based on sales/revenues, production rankings, and management awards that might be good candidates for our study. We eliminated three companies that did not outsource significant amounts of logistics support, and 50 companies either did not respond to our initial inquires or declined to participate in the study. Fourteen companies agreed to participate and completed our interviews and follow-up questions. Thirteen of the 14 companies we interviewed agreed to be identified and are listed below by industry group: Air carriers (Continental Airlines, Houston, Texas; Delta Air Lines, Atlanta, Georgia; FedEx Corp., Memphis, Tennessee; Southwest Airlines, Dallas, Texas; and United Airlines, San Francisco, California); Energy Exploration and Mining (British Petroleum, Houston, Texas; Diamond Offshore, Houston, Texas; Phelps Dodge, Phoenix, Arizona; and Vulcan Material, Birmingham, Alabama); Maritime (Carnival Cruises, Miami, Florida; Conoco Philips Polar Tanker, Long Beach, California; and Disney Cruise, Orlando, Florida); and Entertainment (Disney World, Orlando, Florida).

To identify private sector support practices, including performance-based logistics, we conducted group discussions with respective company officials responsible for maintenance and support operations, budgeting, and contracting. To collect consistent information among the companies, we developed standard group discussion questions based on our literature search and discussions with industry experts. We also included questions

to determine how the companies addressed logistics and contracting issues similar to those that DOD faced in implementing performance-based logistics. We analyzed the responses to identify the prevailing industry practices in supporting complex and costly equipment, especially focusing on the contracting approaches and practices used to outsource support functions and activities.

We reviewed and discussed with Office of the Secretary of Defense and military department officials at the headquarters and major acquisition commands the department's plans, policies, and procedures for using performance-based logistics. We also collected policy and guidance (published and under development) by the Office of the Secretary of Defense as well as the military departments' policies and implementation plans.

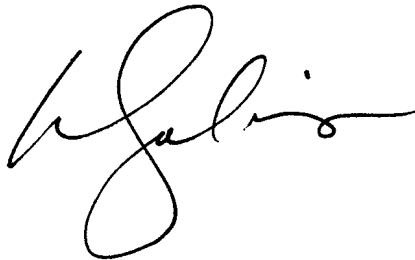
To assess what lessons could be drawn from the private sector companies' experiences to guide DOD's logistics support efforts, we interviewed DOD officials and reviewed ongoing logistics programs. We assessed the reliability of the projected cost and savings data we used in this report by reviewing supporting documentation and interviewing knowledgeable personnel; and we determined that it was sufficient for our purposes. We compared and contrasted the contract logistic approaches and practices used by private sector activities with those currently used by DOD and envisioned under its plans for implementing performance-based logistics. This comparison included such elements as the (1) use of performance-based contracting and the extent of its application, (2) assigning a single integrator for equipment or weapons system maintenance and logistics support on a platform level, (3) management and oversight including the importance of technical data, and (4) the degree of competitive sourcing and the importance of leveraging purchasing power. As part of our continuing review we are also conducting case studies on DOD performance-based logistics weapon systems to further compare the new DOD approach and practices with those of the private sector. This work is continuing and we expect to complete our final report early in 2005.

We performed our work from September 2003 through June 2004 in accordance with generally accepted government auditing standards.

We are sending copies of this report to the appropriate congressional committees, and it will be available at no charge on GAO's Web site at <http://www.gao.gov>. We are continuing with our review of performance-

based logistics in the private sector and in DOD and plan to report the results early in 2005.

If you or your staff have any questions on the matters discussed in this letter, please contact me at (202) 512-8412 or solisw@gao.gov or my assistant director, Julia Denman, at (202) 512-4290 or denmanj@gao.gov. Larry Junek, Thom Barger, Pamela Valentine, Judith Collins, and Cheryl Weissman were major contributors to this report.

A handwritten signature in black ink, appearing to read 'W. Solis', with a large, stylized initial 'W' and a long horizontal stroke extending to the right.

William Solis, Director
Defense Capabilities and Management

Appendix I: Comments from the Department of Defense

Note: A GAO comment supplementing those in the report text appears at the end of this appendix.



DEPUTY UNDER SECRETARY OF DEFENSE FOR
LOGISTICS AND MATERIEL READINESS
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

July 30, 2004

Mr. William Solis
Director, Defense Capabilities and Management
U.S. General Accounting Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. Solis,

This is the Department of Defense (DoD) response to the GAO draft report, "DEFENSE MANAGEMENT: Opportunities to Enhance the Implementation of Performance-Based Logistics," dated July 6, 2004 (GAO Code 350424/GAO-04-715).

The Department concurs with the findings and recommendations presented in the report. The findings indicate that industry on the whole uses Performance-Based Logistics (PBL)-type arrangements on the subsystem or component level, as opposed to an entire platform. The DoD will re-emphasize via policy and training the use of PBL at the subsystem and component level as well as the platform level where viable. Regarding the finding on technical data, the Department concurs, and will take steps to update Acquisition Policy documents such as the 5000 series of DoD regulations to include guidance to Program Managers on purchasing rights or long term access to technical data.

Detailed DoD comments on the draft GAO recommendations are provided in the enclosure. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

A handwritten signature in cursive script that reads "Bradley Berkson".

Bradley Berkson
Acting

Attachment
As stated



See comment 1.

GAO DRAFT REPORT – DATED JULY 6, 2004
GAO CODE 350424/GAO-04-715

"DEFENSE MANAGEMENT: Opportunities to Enhance the Implementation of
Performance-Based Logistics"

DEPARTMENT OF DEFENSE COMMENTS
TO THE RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Under Secretary of Defense (Acquisition, Technology and Logistics) and the Under Secretary of Defense (Comptroller) incorporate in DoD's guidance to the Services the private sector's practice of using performance-based logistics as a tool to achieve economies at the subsystem or component level, rather than as a preferred practice at the platform level. Also, incorporate the private sector's practice of using it when sufficient performance data are available to establish a meaningful cost baseline. (Page 22/GAO Draft Report)

DOD RESPONSE: Concur. The DoD believes it is prudent to pursue PBL strategies at the platform level where supported by a business case analysis, but we also recognize the need to re-emphasize the use of PBL for subsystems and components. The vast majority of current DoD PBLs are at the component or subsystem level. The Department will continue to focus on that aspect in future policy memoranda and guidebooks. Regarding the private sector practice of using PBLs when there is sufficient performance data to establish a meaningful cost baseline, the Department has stated in policy that a Business Case Analysis should be performed to help make the determination to use PBL, and the BCA should incorporate use of performance data, if available, in establishing a meaningful cost baseline. The Department will emphasize this in our upcoming revised policy memoranda on PBL.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Under Secretary of Defense (Acquisition, Technology and Logistics) and the Under Secretary of Defense (Comptroller) to consider requiring program offices, during weapon system acquisition, to develop acquisition strategies that provide for future delivery of sufficient technical data to enable the program office to select an alternate source—public or private—or to offer the work out for competition if the performance-based arrangement fails or becomes prohibitively expensive. (Page 22/GAO Draft Report)

DOD RESPONSE: Concur. As stated in the draft report on pages 18-19, the DoD had previously required Program Managers to ensure long term access to technical data in the previous edition of the DoD Regulation 5000.2-R, but this was rescinded in 2002. The Department concurs that technical, product, and logistics data should be acquired by the PM to support the development, production, operation, sustainment, improvement, demilitarization

Note: Page numbers in
the draft report may differ
from those in this report.

**Appendix I: Comments from the Department
of Defense**

and disposal of a system. Data management guidance has been added to the Defense Acquisition Guidebook and the draft updated "Performance Based Logistics: A Program Manager's Product Support Guide" which is currently in coordination. Both of these documents convey the importance of having a Data Management strategy that considers life cycle requirements in the decision to acquire data for use throughout the product life cycle. However, since these documents are guidance in nature and not considered "mandatory" by the Program Managers, the Department will take steps to include, in the next iteration of the DoDD 5000.1 and DoDI 5000.2 acquisition regulations, policy that will require the program manager to establish a data management strategy that requires access to the minimum data necessary to sustain the fielded system, recompute or reconstitute sustainment if necessary, promote real time access vice delivery of data, and provide for the availability of quality data at the point of need for the intended user. For a PBL arrangement, this will include acquiring the appropriate technical data needed to support an exit strategy should the PBL fail or become too expensive.

GAO's Comment

1. Only 7 of the 14 companies we interviewed use some type of performance-based contracting arrangements. None of the performance-based arrangements in the seven companies using them were at the platform level.

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