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DOD'S HIGH-RISK AREAS

Challenges Remain to Achieving and Demonstrating Progress in Supply Chain Management

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Highlights

Highlights of GAO-06-983T, testimony before the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

The Department of Defense (DOD) maintains a military force with unparalleled logistics capabilities, but it continues to confront decades-old supply chain management problems. The supply chain can be the critical link in determining whether our frontline military forces win or lose on the battlefield, and the investment of resources in the supply chain is substantial. Because of weaknesses in DOD's supply chain management, this program has been on GAO's list of high-risk areas needing urgent attention and transformation since 1990. Last year, DOD developed a plan to resolve its long-term supply chain problems in three focus areas: requirements forecasting, asset visibility, and materiel distribution. In October 2005, GAO testified that the plan was a good first step.

GAO was asked to provide its views on DOD's progress toward (1) implementing the supply chain management improvement plan and (2) incorporating performance measures for tracking and demonstrating improvement, as well as to comment on the alignment of DOD's supply chain management improvement plan with other department logistics plans.

This testimony is based on prior GAO reports and ongoing work in this area. It contains GAO's views on opportunities to improve DOD's ability to achieve and demonstrate progress in supply chain management.

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To view the full product, click on the link above. For more information, contact William Solis at 202-512-8365 or solisw@gao.gov.

What GAO Found

Since October 2005, DOD has continued to make progress implementing the 10 initiatives in its supply chain management improvement plan, but it will take several years to fully implement these initiatives. DOD's stated goal for implementing its plan is to demonstrate significant improvement in supply chain management within 2 years of the plan's inception in 2005, but the time frames for substantially implementing some initiatives are currently 2008 or later. While DOD has generally stayed on track, it has reported some slippage in the implementation of certain initiatives. Factors such as the long-standing nature of the problems, the complexities of the initiatives, and the involvement of multiple organizations within DOD could cause the implementation dates of some initiatives to slip further.

DOD has incorporated several broad performance measures in its supply chain management improvement plan, but it continues to lack outcome-focused performance measures for many of the initiatives. Therefore, it is difficult to track and demonstrate progress toward improving the three focus areas of requirements forecasting, asset visibility, and materiel distribution. Although DOD's plan includes four high-level performance measures that are being tracked across the department, these measures do not necessarily reflect the performance of the initiatives and do not relate explicitly to the three focus areas. Further, DOD's plan does not include cost metrics that might show efficiencies gained through supply chain improvement efforts. In their effort to develop performance measures for use across the department, DOD officials have encountered challenges such as a lack of standardized, reliable data. Nevertheless, DOD could show near-term progress by adding intermediate measures. These measures could include outcome-focused measures for each of the initiatives or for the three focus areas.

DOD has multiple plans aimed at improving aspects of logistics, including supply chain management, but it is unclear how these plans are aligned with one another. The plans were developed at different points of time, for different purposes, and in different formats, so it is difficult to determine how all the ongoing efforts link together to sufficiently cover requirements forecasting, asset visibility, and materiel distribution and whether they will result in significant progress toward resolving this high-risk area. Also, DOD's supply chain management improvement plan does not account for initiatives outside the direct oversight of the Office of the Secretary of Defense, and DOD lacks a comprehensive strategy to guide logistics programs and initiatives. DOD is in the process of developing a new plan, referred to as the "To Be" roadmap, for future logistics programs and initiatives. The roadmap is intended to portray where the department is headed in the logistics area, how it will get there, and what progress is being made toward achieving its objectives, as well as to link ongoing capability development, program reviews, and budgeting. However, until the roadmap is completed, GAO will not be able to assess how it addresses the challenges and risks DOD faces in its supply chain improvement efforts.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Department of Defense's (DOD) efforts to resolve long-standing problems in supply chain management. DOD maintains a military force with unparalleled logistics capabilities and can claim success in meeting the challenges to supplying the warfighter. For example, by early 2005, DOD moved more than 2 million short tons of cargo, including equipment, spare parts, and supplies, several thousand miles to the Persian Gulf in support of Operation Iraqi Freedom. At the same time, there are pervasive, decades-old problems in DOD's supply chain management that need to be addressed and resolved. The Under Secretary of Defense for Acquisition, Technology, and Logistics, as well as other senior DOD officials, has shown a commitment to improving supply chain management. The continued active involvement of this Subcommittee is important to focusing attention on this issue and encouraging DOD to demonstrate progress.

The fundamental premise of supply chain management is the operation of a continuous, unbroken, comprehensive, and all-inclusive logistics process, from initial customer order for materiel or services to the ultimate satisfaction of the customer's requirements. Supply chain management in DOD consists of processes and activities to purchase, produce, and deliver materiel—including ammunition, spare parts, fuel, food, water, clothing, personal equipment, and other items—to a force that is highly dispersed and mobile. In 2005, the Army alone had some 260,000 soldiers serving in 120 foreign countries. Altogether, DOD manages more than 4 million separate types of items that are procured from thousands of suppliers. The challenges to successfully improving management of this vast and complex supply chain network are formidable. Challenges may include fragmentation in the way supply chain management is understood and applied, failure to develop true integration of supply chain processes, organizational resistance, lack of buy-in from top managers, lack of or slow development of needed measurement systems, and lack of integrated information systems linking participants in the supply chain. Private industry, it should be noted, also faces these types of challenges to improving their own supply chains.[1]

Why is effective supply chain management important for DOD? There are two primary reasons. First, supply support to the warfighter affects

[1] Deputy Under Secretary of Defense, Supply Chain Integration, *DOD Supply Chain Management Implementation Guide, (*McLean, Va.: Logistics Management Institute, 2000).

readiness and military operations. In fact, the supply chain can be the critical link in determining whether our front-line military forces win or lose on the battlefield. Second, given the high demand for goods and services to support ongoing U.S. military operations, the investment of resources in the supply chain is substantial. For example, DOD estimated that the annual costs of supplies and associated operations were expected to be about $50 billion for fiscal year 2005. In addition, DOD's inventory was valued at approximately $80 billion at the end of that fiscal year. Over the next 6 years, DOD also plans to invest about $54 billion in aircraft, trucks, ships, and other mobility assets to deploy and supply its forces. In addition, the Secretary of Defense recently stated that one of his top priorities between 2006 and 2008 is improving effectiveness and efficiency across the department, including creating a culture of efficiency and eliminating waste. These are issues that we have identified as critical to improving supply chain management.

Because of weaknesses we have identified through our work, DOD's supply chain management is on our list of 26 high-risk government programs that need urgent attention and transformation to ensure that our national government functions in the most economical, efficient, and effective manner possible. Last year, with the encouragement of the Office of Management and Budget (OMB), DOD developed a supply chain management improvement plan aimed at putting DOD on a path toward resolving long-term supply chain problems and, eventually, removal from our list of high-risk programs. More specifically, with the plan's inception in July 2005, DOD hoped to produce significant improvements over the next 2 years. This month marks approximately the midpoint of that 2-year period, which ends in July 2007. The plan encompasses 10 initiatives to address three key areas of the supply chain management process: requirements forecasting, asset visibility, and materiel distribution. (Attachment 1 provides a description of the initiatives and shows the focus area or areas that they are intended to address). The requirements forecasting initiatives in the plan aim to improve inventory management by reducing low-usage inventory, increasing the availability of high-usage and critical inventory, more accurately identifying war reserve stocks, forecasting wartime demand, and identifying items with long procurement lead times. The plan's initiatives that affect asset visibility seek to improve DOD's ability to provide timely and accurate information regarding the location, quantity, condition, movement, and status of materiel assets across the department. Finally, the materiel distribution initiatives were included to improve the timely and seamless flow of materiel in support of deployed forces. We have frequently identified systemic weaknesses in these three areas as impeding effective supply chain management.

During the Subcommittee's October 2005 hearing on this subject, I stated that DOD's plan addressing supply chain management was a good first step toward putting DOD on a path toward resolving long-standing supply chain management problems, but that the department faced a number of challenges and risks in fully implementing its proposed changes across the department and measuring progress.[2] That bottom-line view remains the same today. Since October, DOD has regularly updated its supply chain management improvement plan, added more details, and has made progress implementing individual initiatives by generally meeting the milestones laid out in its plan. However, as DOD moves forward, we believe that there are opportunities to further improve DOD's ability to show progress toward resolving long-term supply chain problems.

As requested, my comments today will focus on DOD's progress in (1) implementing the supply chain management improvement plan and (2) incorporating performance measures for tracking and demonstrating improvement. In addition, you also asked me to comment on the extent to which DOD's supply chain management improvement plan is aligned with other logistics plans across the department that address aspects of the supply chain. My testimony is based on previous GAO reports and testimonies and our preliminary observations from an ongoing engagement requested by this Subcommittee on DOD's efforts to resolve long-standing problems in its supply chain management process. To obtain our preliminary observations, we have met on a regular basis with DOD officials and staff from OMB to discuss the overall status of the plan, the implementation of the plan's individual initiatives, and performance measures; and we have reviewed relevant documents, such as current DOD and military service logistics plans and strategies. This work is being performed in accordance with generally accepted government auditing standards.

Summary

Since October 2005, DOD has continued to make progress implementing the 10 initiatives in its supply chain management improvement plan, but it will take DOD several years to fully implement these initiatives under current schedules. DOD has sought to demonstrate significant improvement in supply chain management within 2 years of the plan's inception in 2005; however, the department may have difficulty meeting its short-term goal. Some of the initiatives are still being developed or piloted and have not yet reached the implementation stage, others are in the early

[2] GAO, *DOD's High-Risk Areas: High-Level Commitment and Oversight Needed for DOD Supply Chain Plan to Succeed*, GAO-06-113T (Washington, D.C.: Oct. 6, 2005).

stages of implementation, and some are not scheduled for completion until 2008 or later. While DOD has generally stayed on track, it has reported some slippage in the implementation of certain initiatives. Given the long-standing nature of the problems being addressed, the complexities of the initiatives, and the involvement of multiple organizations within DOD, we would expect to see further slippage in the future. We have also previously identified challenges to implementation such as maintaining long-term commitment for the initiatives and ensuring sufficient resources are obtained from the organizations involved, including the military services and the Defense Logistics Agency (DLA).

While DOD has incorporated several broad performance measures in its supply chain management improvement plan, the department continues to lack outcome-focused performance measures for many of the initiatives. Therefore, it is difficult to track and demonstrate DOD's progress toward improving its performance in the three focus areas of requirements forecasting, asset visibility, and materiel distribution. Performance measures track an agency's progress toward achieving goals, provide information on which to base organizational and management decisions, and are important management tools for all levels of an agency, including the program or project level. Outcome-focused performance measures show results or outcomes related to an initiative or program in terms of its effectiveness, efficiency, impact, or all of these. DOD's plan includes four high-level performance measures, such as customer wait time, that are being tracked across the department, but these measures do not necessarily reflect the performance of the initiatives and do not explicitly relate to the three focus areas. In addition, DOD's plan lacks outcome-focused performance measures for many of the specific initiatives. Further, DOD still has not included cost metrics in its plan that might show efficiencies gained through supply chain improvement efforts, either at the initiative level or overall. Although DOD officials have made efforts to develop supply chain management performance measures for implementation across the department, they have encountered challenges such as a lack of standardized, reliable data. Consequently, DOD lacks a means to track and assess progress toward improving efficiency and eliminating waste in supply chain management. However, DOD could show near-term progress by adding intermediate measures. These measures could include outcome-focused measures for each of the initiatives or for the three focus areas.

DOD has multiple plans aimed at improving aspects of logistics, including supply chain management, but it is unclear how all these plans are aligned with one another. In addition to the supply chain management improvement plan, current DOD plans that address aspects of supply

chain management include DOD's Logistics Transformation Strategy, Focused Logistics Roadmap, and Enterprise Transition Plan; and DLA's Transformation Roadmap. These plans were developed at different points of time, for different purposes, and in different formats. Therefore, it is difficult to determine how all the ongoing efforts link together to sufficiently cover requirements forecasting, asset visibility, and materiel distribution and whether they will result in significant progress toward resolving this high-risk area. Also, the DOD supply chain management improvement plan does not account for initiatives outside the direct oversight of the Office of the Secretary of Defense (OSD) that may have an impact on supply chain management. Until DOD clearly aligns the supply chain management improvement plan with other department plans and ongoing initiatives, supply chain stakeholders will not have complete visibility and awareness of actions DOD is taking to resolve problems in the supply chain. Moreover, DOD lacks a comprehensive, integrated, and enterprisewide strategy to guide logistics programs and initiatives. To address this concern, OSD is working with the military services, DLA, and other stakeholders to develop a new strategic plan for future logistics programs and initiatives. Referred to as the "To Be" roadmap, this plan is intended to portray where the department is headed in the logistics area, how it will get there, and what progress is being made toward achieving its objectives, as well as to institutionalize a continuous assessment process that links ongoing capability development, program reviews, and budgeting. According to DOD officials, the initiatives in the supply chain management improvement plan will be incorporated into this roadmap. The first edition of the "To Be" roadmap is scheduled for completion in February 2007, in conjunction with the submission of the President's Budget for Fiscal Year 2008. However, until it is completed, we will not be able to assess the extent to which the roadmap aligns and integrates DOD's various supply chain improvement efforts.

Background

For 16 years, DOD's supply chain management processes, previously identified as DOD inventory management, have been on our list of high-risk areas needing urgent attention because of long-standing systemic weaknesses that we have identified in our reports. We initiated our high-risk program in 1990 to report on government operations that we identified as being at high risk for fraud, waste, abuse, and mismanagement. The program serves to identify and help resolve serious weaknesses in areas that involve substantial resources and provide critical services to the public. The department's inventory management of supplies in support of forces was one of the initial 14 operational areas identified as high risk in 1990 because, over the previous 20 years, we had issued more than 100 reports dealing with specific aspects and problems in DOD's

inventory management. These problems included excess inventory levels, inadequate controls over items, and cost overruns. As a result of this work, we had suggested that DOD take some critical steps to correct the problems identified. Since then, our work has shown that the problems adversely affecting supply support to the warfighter—such as requirements forecasts, use of the industrial base, funding, distribution, and asset visibility—were not confined to the inventory management system, but also involved the entire supply chain. In 2005, we modified the title for this high-risk area from "DOD Inventory Management" to "DOD Supply Chain Management." In the 2005 update, we noted that during Operation Iraqi Freedom, some of the supply chain problems included backlogs of hundreds of pallets and containers at distribution points, millions of dollars spent in late fees to lease or replace storage containers because of distribution backlogs and losses, and shortages of such items as tires and radio batteries.

Removal of the high-risk designation is considered when legislative and agency actions, including those in response to our recommendations, result in significant and sustainable progress toward resolving a high-risk problem.[3] Key determinants include a demonstrated strong commitment to and top leadership support for addressing problems, the capacity to do so, a corrective action plan that provides for substantially completing corrective measures in the near term, a program to monitor and independently validate the effectiveness of corrective measures, and demonstrated progress in implementing corrective measures.

Last year, with the encouragement of OMB, DOD developed a plan for improving supply chain management that could reduce its vulnerability to fraud, waste, abuse, and mismanagement and place it on the path toward removal from our list of high-risk areas. This plan, initially released in July 2005, contains 10 initiatives proposed as solutions to address the root causes of problems DOD identified in the areas of forecasting requirements, asset visibility, and materiel distribution. By committing to improve these three key areas, DOD has focused its efforts on the areas we frequently identified as impeding effective supply chain management. For each of the initiatives, the plan contains implementation milestones that are tracked and updated monthly.

[3] GAO, *Determining Performance and Accountability Challenges and High Risks*, GAO-01-159SP (Washington, D.C.: November 2000).

DOD Continues to Implement Its Supply Chain Management Improvement Plan, but Full Implementation Will Take Several Years

Since October 2005, DOD has continued to make progress implementing the initiatives in its supply chain management improvement plan, but it will be several years before the plan can be fully implemented. Progress has been made in implementing several of the initiatives, including its Joint Regional Inventory Materiel Management, Readiness Based Sparing, and the Defense Transportation Coordination Initiative. For example:

- Within the last few months, through its Joint Regional Inventory Materiel Management initiative, DOD has begun to streamline the storage and distribution of defense inventory items on a regional basis, in order to eliminate duplicate materiel handling and inventory layers. Last year, DOD completed a pilot for this initiative in the San Diego region and, in January 2006, began a similar transition for inventory items in Oahu, Hawaii.

- Readiness Based Sparing, an inventory requirements methodology that the department expects to enable higher levels of readiness at equivalent or reduced inventory costs using commercial off-the-shelf software, began pilot programs in each service in April 2006.

- Finally, in May 2006, the U.S. Transportation Command held the presolicitation conference for its Defense Transportation Coordination Initiative, a long-term partnership with a transportation management services company that is expected to improve the predictability, reliability, and efficiency of DOD freight shipping within the continental United States.

DOD has sought to demonstrate significant improvement in supply chain management within 2 years of the plan's inception in 2005; however, the department may have difficulty meeting its July 2007 goal. Some of the initiatives are still being developed or piloted and have not yet reached the implementation stage, others are in the early stages of implementation, and some are not scheduled for completion until 2008 or later. For example, according to the DOD supply chain management improvement plan, the contract for the Defense Transportation Coordination Initiative is scheduled to be awarded during the first quarter of fiscal year 2007, followed by a 3-year implementation period. The War Reserve Materiel Improvements initiative, which aims to more accurately forecast war reserve requirements by using capability-based planning and incorporating lessons learned in Operation Iraqi Freedom, is not scheduled to begin implementing an improved requirements forecasting process for

consumable items[4] as a routine operation until October 2008. The Item Unique Identification initiative, which involves marking personal property items with a set of globally unique data elements to help DOD track items during their life cycles, will not be completed until December 2010 under the current schedule.

While DOD has generally stayed on track, DOD has reported some slippage in meeting scheduled milestones for certain initiatives. For example, a slippage of 9 months occurred in the Commodity Management initiative because additional time was required to develop a departmentwide approach. This initiative addresses the process of developing a systematic procurement approach to the department's needs for a group of items. Additionally, the Defense Transportation Coordination Initiative experienced a slippage in holding the presolicitation conference because defining requirements took longer than anticipated. Given the long-standing nature of the problems being addressed, the complexities of the initiatives, and the involvement of multiple organizations within DOD, we would expect to see further milestone slippage in the future. In our October testimony, we also identified challenges to implementation such as maintaining long-term commitment for the initiatives and ensuring sufficient resources are obtained from the organizations involved. Although the endorsement of DOD's plan by the Under Secretary of Defense for Acquisition, Technology, and Logistics is evidence of a strong commitment to improve DOD's supply chain management, DOD will have to sustain this commitment as it goes forward in implementing this multiyear plan while also engaged in departmentwide business transformation efforts. Furthermore, the plan was developed at the Office of the Under Secretary of Defense level, whereas most of the people and resources needed to implement the plan are under the direction of the military services, DLA, and other organizations such as U.S. Transportation Command. Therefore, it is important for the department to obtain the necessary resource commitments from these organizations to ensure the initiatives in the plan are properly supported.

[4] Consumable items are items that are discarded after use rather than repaired. Examples include food, clothing, hardware, and medical supplies.

Supply Chain Improvement Plan Lacks Outcome-focused Performance Measures for Many of the Initiatives

While DOD has incorporated several broad performance measures in its supply chain management improvement plan, the department continues to lack outcome-focused performance measures for many of the initiatives. Therefore, it is difficult to track and demonstrate DOD's progress toward improving its performance in the three focus areas of requirements forecasting, asset visibility, and materiel distribution. Performance measures track an agency's progress made towards goals, provide information on which to base organizational and management decisions, and are important management tools for all levels of an agency, including the program or project level. Outcome-focused performance measures show results or outcomes related to an initiative or program in terms of its effectiveness, efficiency, impact, or all of these. To track progress towards goals, effective performance measures should have a clearly apparent or commonly accepted relationship to the intended performance, or should be reasonable predictors of desired outcomes; are not unduly influenced by factors outside a program's control, measure multiple priorities, such as quality, timeliness, outcomes, and cost; sufficiently cover key aspects of performance; and adequately capture important distinctions between programs. Performance measures enable the agency to assess accomplishments, strike a balance among competing interests, make decisions to improve program performance, realign processes, and assign accountability. While it may take years before the results of programs become apparent, intermediate measures can be used to provide information on interim results and show progress towards intended results. In addition, when program results could be influenced by external factors, intermediate measures can be used to identify the programs' discrete contribution to the specific result. For example, DOD could show near-term progress by adding intermediate measures for the DOD supply chain management improvement plan, such as outcome-focused performance measures for the initiatives or for the three focus areas.

DOD's supply chain management improvement plan includes four high-level performance measures that are being tracked across the department, but these measures do not necessarily reflect the performance of the initiatives or explicitly relate to the three focus areas. DOD's supply chain materiel management regulation requires that functional supply chain metrics support at least one enterprise-level metric.[5] In addition, while not required by the regulation, the performance measures DOD has included in the plan are not explicitly linked to the three focus areas, and it has not included overall cost metrics that might show efficiencies gained through supply chain improvement efforts. The four measures are as follows:

[5] DOD 4140.1-R, *DOD Supply Chain Materiel Management Regulation* (May 23, 2003).

- Backorders—number of orders held in an unfilled status pending receipt of additional parts or equipment through procurement or repair.

- Customer wait time—number of days between the issuance of a customer order and satisfaction of that order.

- On-time orders—percentage of orders that are on time according to DOD's established delivery standards.

- Logistics response time—number of days to fulfill an order placed on the wholesale level of supply from the date a requisition is generated until the materiel is received by the retail supply activity.[6]

The plan also identifies fiscal year 2004 metric baselines for each of the services, DLA, and DOD overall, and specifies annual performance targets for these metrics for use in measuring progress. For example, one performance target for fiscal year 2005 was to reduce backorders by 10 percent from the fiscal year 2004 level. Table 1 shows each performance measure with the associated fiscal year 2005 performance targets and actuals and whether the target was met.

Table 1: Supply Chain Performance Measures (Fiscal Year 2005)

Performance measure	Target	Actual	Target met/Not met
Backorders	514,800	642,000	Not Met
Customer wait time	18 days	21 days	Not Met
On-time orders[a]	75%	48%	Not Met
Logistics response time[a]			
Army	27 days	57 days	Not Met
Navy	27 days	28 days	Not Met
Air Force	27 days	36 days	Not Met
DLA	27 days	13 days	Met

Source: GAO analysis.

[a]Data includes the continental United States only.

[6] DOD maintains spare parts at two levels of inventory. Wholesale-level inventory represents inventory managed centrally, while retail-level inventory represents inventory held for use at maintenance activities or operational units.

As table 1 shows, DOD generally did not meet its fiscal year 2005 performance targets. However, the impact to the supply chain as a result of implementing the initiatives contained in the plan will not likely be reflected in these high-level performance metrics until the initiatives are broadly implemented across the department. In addition, the high-level metrics reflect the performance of the supply chain departmentwide and are affected by other variables; therefore, it will be difficult to determine if improvements in the high-level performance metrics are due to the initiatives in the plan or other variables. For example, implementing Radio Frequency Identification—technology consisting of active or passive electronic tags that are attached to equipment and supplies being shipped from one location to another and enable shipment tracking—at a few sites at a time has only a very small impact on customer wait time. However, variables such at natural disasters, wartime surges in requirements, or disruption in the distribution process could affect that metric.

DOD's plan lacks outcome-focused performance metrics for many of the specific initiatives. We noted this deficiency in our prior testimony, and since last October, DOD has not added outcome-focused performance metrics. DOD also continues to lack cost metrics that might show efficiencies gained through supply chain improvement efforts, either at the initiative level or overall. In total, DOD's plan continues to identify a need to develop outcome-focused performance metrics for 6 initiatives, and 9 of the 10 initiatives lack cost metrics. For example, DOD's plan shows that it expects to have radio frequency identification technology implemented at 100 percent of its U.S. and overseas distribution centers by September 2007, but noted that it has not yet identified additional metrics that could be used to show the impact of implementation on expected outcomes, such as receiving and shipping timeliness, asset visibility, or supply consumption data. Two other examples of initiatives lacking outcome-focused performance measures are War Reserve Materiel, discussed earlier, and Joint Theater Logistics, which is an effort to improve the ability of a joint force commander to execute logistics authorities and processes within a theater of operations. Although the plan contains some performance metrics, many have not been fully defined or are intended to show the status of a project. Measures showing project status are useful and may be most appropriate for initiatives in their early stages of development, but such measures will not show the impact of initiatives on the supply chain during or after implementation. DOD officials noted that many of the initiatives in the supply chain management improvement plan are in the early stages of implementation and that they are working to develop performance measures for them. For example, an official involved with the Joint Theater Logistics initiative stated that the processes necessary for each joint capability needed to be defined before

performance metrics could be developed. The recently issued contract solicitation for the Defense Transportation Coordination Initiative contains a number of performance measures, such as on-time pickup and delivery, damage-free shipments, and system availability, although these measures are not yet included in DOD's supply chain management improvement plan. Additionally, we observed that DOD's plan does not identify departmentwide performance measures in the focus areas of requirements forecasting, asset visibility, and materiel distribution. Therefore, it currently lacks a means to track and assess progress in these areas.

Although DOD has made efforts to develop supply chain management performance measures for implementation across the department, DOD has encountered challenges in obtaining standardized, reliable data from noninteroperable systems. The four high-level performance measures in DOD's plan were defined and developed by DOD's supply chain metrics working group. This group includes representatives from the services, DLA, and the U.S. Transportation Command, and meets monthly under the direction of the Office of the Under Secretary of Defense. For example, the working group developed a common definition for customer wait time which was included in DOD guidance.[7] The DOD Inspector General has a review underway to validate the accuracy of customer wait time data and expects to issue a report on its results later this summer. One of the challenges the working group faces in developing supply chain performance measures is the ability to pull standardized, reliable data from noninteroperable information systems. For example, the Army currently does not have an integrated method to determine receipt processing for Supply Support Activities, which could affect asset visibility and distribution concerns. Some of the necessary data reside in the Global Transportation Network while other data reside in the Standard Army Retail Supply System. These two databases must be manually reviewed and merged in order to obtain the information for accurate receipt processing performance measures.

DOD recognizes that achieving success in supply chain management is dependent on developing interoperable systems that can share critical supply chain data. The Business Management Modernization Program, one of the initiatives in DOD's supply chain improvement plan that has been

[7] DOD Instruction 4140.61, *Customer Wait Time and Time Definite Delivery* (December 14, 2000).

absorbed into the Business Transformation Agency,[8] is considered to be a critical enabler that will provide the information technology underpinning for improving supply chain management. As part of this initiative, DOD issued an overarching business enterprise architecture and an enterprise transition plan for implementing the architecture.[9] We previously reported that Version 3.1[10] of the business enterprise architecture reflects steps taken by DOD to address some of the missing elements, inconsistencies, and usability issues related to legislative requirements and relevant architecture guidance, but additional steps are needed.[11] For example, we said that the architecture does not yet include a systems standards profile to facilitate data sharing among departmentwide business systems and promote interoperability with departmentwide information technology infrastructure systems. Furthermore, we also stated that the military services' and defense agencies' architectures are not yet adequately aligned with the departmental architecture.

DOD Has Multiple Plans Addressing Supply Chain Management, but Alignment Among Them Is Unclear

DOD has multiple plans aimed at improving aspects of logistics, including supply chain management, but it is unclear how all these plans are aligned with one another. In addition to the supply chain management improvement plan, current DOD plans that address aspects of supply chain management include DOD's Logistics Transformation Strategy, Focused Logistics Roadmap, and Enterprise Transition Plan; and DLA's Transformation Roadmap.

[8] The Business Transformation Agency leads and coordinates business transformation efforts across the department. The Business Management Modernization Program's mission is to advance departmentwide business transformation efforts, particularly with regard to business systems modernization.

[9] The enterprise architecture, or modernization blueprint, provides a clear and comprehensive picture of an entity, whether it is an organization (e.g., federal department or agency) or a functional or mission area that cuts across more than one organization (e.g., financial management). This picture consists of snapshots of the enterprise's current "As Is" operational and technological environment and its target or "To Be" environment, as well as a capital investment roadmap for transitioning from the current to the target environment. These snapshots further consist of "views," which are basically one or more architecture products that provide conceptual or logical representations of the enterprise.

[10] Version 3.1 is a minor update to its business enterprise architecture released on March 15, 2006.

[11] GAO, *Business Systems Modernization: DOD Continues to Improve Institutional Approach, but Further Steps Needed*, GAO-06-658 (Washington, D.C.: May 15, 2006).

In December 2004, DOD issued its Logistics Transformation Strategy. The strategy was developed to reconcile three logistics concepts—force-centric logistics enterprise, sense and respond logistics, and focused logistics—into a coherent transformation strategy. The force-centric logistics enterprise is OSD's midterm concept (2005-2010) for enhancing support to the warfighter and encompasses six initiatives, one of which includes "end-to-end distribution." Sense and respond logistics is a future logistics concept developed by the department's Office of Force Transformation that envisions a networked logistics system that would provide joint strategic and tactical operations with predictive, precise, and agile support. Focused logistics, a concept for force transformation developed by the Joint Chiefs of Staff, identifies seven key joint logistics capability areas such as Joint Deployment/Rapid Distribution.

In September 2005, DOD issued its Focused Logistics Roadmap, also referred to as the "As Is" roadmap. It documents logistics-enabling programs and initiatives directed toward achieving focused logistics capabilities. It is intended to provide a baseline of programs and initiatives for future capability analysis and investment. Seven of the 10 initiatives in the DOD supply chain management improvement plan and some of the systems included in the initiative to modernize the department's business systems—under the Business Transformation Agency—are discussed in the Focused Logistics Roadmap.

In September 2005, DOD's Enterprise Transition Plan was issued as part of the Business Management Modernization Program. The Enterprise Transition Plan is the department's plan for transforming its business operations. One of the six DOD-wide priorities contained in the Enterprise Transition plan is Materiel Visibility, which is focused on improving supply chain performance. The Materiel Visibility priority is defined as the ability to locate and account for materiel assets throughout their life cycle and provide transaction visibility across logistics systems in support of the joint warfighting mission. Two of the key programs targeting visibility improvement are Radio Frequency Identification and Item Unique Identification, which also appear in the supply chain management improvement plan.

The Defense Logistics Agency's Fiscal Year 2006 Transformation Roadmap contains 13 key initiatives underway to execute DLA's role in DOD's overarching transformation strategy. The majority of the initiatives are those that affect supply chain management, and several are found in DOD's supply chain management improvement plan. For example, the Integrated Data Environment, Business Systems Modernization, and Reutilization Modernization Program initiatives found in DLA's

Transformation Roadmap are also in the department's supply chain management improvement plan under the initiative to modernize the department's business systems.

These plans were developed at different points of time, for different purposes, and in different formats. Therefore, it is difficult to determine how all the ongoing efforts link together to sufficiently cover requirements forecasting, asset visibility, and materiel distribution and whether they will result in significant progress toward resolving this high-risk area. Moreover, DOD's supply chain management improvement plan does not account for initiatives outside OSD's direct oversight that may have an impact on supply chain management. The initiatives chosen for the plan were joint initiatives under the oversight of OSD in the three focus areas of requirements forecasting, asset visibility, and materiel distribution. However, the U. S. Transportation Command, DLA, and the military services have ongoing and planned supply chain improvement efforts in those areas that are not included in the plan. For example, the U.S. Transportation Command's Joint Task Force – Port Opening initiative seeks to improve materiel distribution by rapidly extending the distribution network into a theater of operations. Furthermore, DLA is implementing a National Inventory Management Strategy, which is an effort to merge distinct wholesale and retail inventories into a national inventory, provide more integrated management, tailor inventory to services' requirements, and reduce redundant inventory levels. Another example is the Army's efforts to field two new communications and tracking systems, the Very Small Aperture Terminal and the Mobile Tracking System, to better connect logisticians on the battlefield and enable them to effectively submit and monitor their supply requisitions. DOD officials told us they would be willing to consider adding initiatives that impact the three focus areas. Until DOD clearly aligns the supply chain management improvement plan with other department plans and ongoing initiatives, supply chain stakeholders will not have a comprehensive picture of DOD's ongoing efforts to resolve problems in the supply chain.

Although we are encouraged by DOD's planning efforts, DOD lacks a comprehensive, integrated, and enterprisewide strategy to guide logistics programs and initiatives. In the past, we have emphasized the need for an overarching logistics strategy that will guide the department's logistics

planning efforts.[12] Without an overarching logistics strategy, the department will be unable to most economically and efficiently support the needs of the warfighter. To address this concern and guide future logistics programs and initiatives, DOD is in the process of developing a new strategic plan—the "To Be" roadmap. This plan is intended to portray where the department is headed in the logistics area, how it will get there, and monitor progress toward achieving its objectives, as well as institutionalize a continuous assessment process that links ongoing capability development, program reviews, and budgeting. According to DOD officials, the initiatives in the supply chain management improvement plan will be incorporated into the "To Be" logistics roadmap.

The roadmap is being developed by a working group representing the four services, DLA, the U.S. Transportation Command, the U.S. Joint Forces Command, the Joint Staff, the Business Transformation Agency, and the Office of the Secretary of Defense. The working group reports to a Joint Logistics Group comprised of one-star generals and their equivalents representing these same organizations. Additionally, the Joint Logistics Board, Defense Logistics Board, and the Defense Logistics Executive (the Under Secretary of Defense for Acquisition, Technology, and Logistics) would provide continuous feedback and recommendations for changes to the roadmap. Regarding performance measures, the roadmap would link objective, quantifiable, and measurable performance targets to outcomes and logistics capabilities. The first edition of the "To Be" roadmap is scheduled for completion in February 2007, in conjunction with the submission of the President's Budget for Fiscal Year 2008. Updates to the roadmap will follow on an annual basis. Efforts to develop the "To Be" roadmap show promise. However, until it is completed, we will not be able to assess how the roadmap addresses the challenges and risks DOD faces in its supply chain improvement efforts.

Concluding Observations

DOD faces significant challenges in improving supply chain management over the coming years. As it develops its "To Be" roadmap for logistics, DOD would likely benefit from including outcome-focused performance measures demonstrating near-term progress in the three focus areas of requirements forecasting, asset visibility, and materiel distribution. With outcome-focused performance measures, DOD will be able to show results in these areas that have been long identified as systemic weaknesses in the

[12] GAO, *Defense Logistics: Strategic Planning Weaknesses Leave Economy, Efficiency, and Effectiveness of Future Support Systems at Risk*, GAO-02-106 (Washington, D.C.: Oct. 11, 2001).

supply chain. While we recognize the challenge to developing outcome-focused performance measures at the department level, DOD could show near-term progress with intermediate measures. These measures could include outcome-focused measures for each of the initiatives or for the three focus areas. To be most effective, the roadmap also would reflect the results of analysis of capability gaps between its "As Is" and "To Be" roadmaps, as well as indicate how the department intends to make this transition. DOD would also benefit by showing the alignment among the roadmap, the supply chain management improvement plan, and other DOD strategic plans that address aspects of supply chain management. Clearer alignment of the supply chain management improvement plan with other department plans and ongoing initiatives could provide greater visibility and awareness of actions DOD is taking to resolve problems in the supply chain. In the long term, however, a plan alone will not resolve the problems that we have identified in supply chain management. Actions must result in significant progress toward resolving a high-risk problem before we will remove the high-risk designation.

Mr. Chairman and Members of the Subcommittee, this concludes my prepared remarks. I would be happy to answer any questions you or other Members of the Subcommittee may have.

Staff Contacts and Acknowledgements

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Attachment 1: Initiatives in DOD Supply Chain Management Improvement Plan

Initiative	Description	Focus area		
		Visibility	Forecasting	Distribution
Radio Frequency Identification	Technology consisting of active or passive electronic tags that are attached to equipment and supplies that are shipped from one location to another and enable shipment tracking.	X	X	X
Item Unique Identification	Marking of personal property items with a machine-readable Unique Item Identifier, or set of globally unique data elements, to help DOD value and track items throughout their life cycle.	X	X	
Joint Regional Inventory Materiel Management	Streamlining of the storage and distribution of materiel within a given geographic area in order to eliminate duplicate materiel handling and inventory layers.	X	X	X
Readiness Based Sparing	An inventory requirements methodology that produces an inventory investment solution that enables higher levels of readiness at an equal or lower cost.		X	
War Reserve Materiel Improvements	An improved war reserve requirements forecasting process.		X	X
Commodity Management	Process of developing a systematic procurement approach to the entire usage cycle of a group of items.	X	X	
Joint Theater Logistics	Improving the ability of a joint force commander to execute logistics authorities and processes within a theater of operations.	X		X
Joint Deployment and Distributions Operations Center	Provides Combatant Commands with a joint theater logistics capability (supply, transportation, and distribution) for command and control of forces and materiel moving into and out of the theater.	X		X
Defense Transportation Coordination Initiative	Long-term partnership with a coordinator of transportation management services to improve the reliability, predictability, and efficiency of DOD materiel moving within the continental United States by all modes.			X
Business Management Modernization Program	Departmentwide initiative to advance business transformation efforts, particularly with regard to business systems modernization.	X	X	X

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