

GOVERNMENT ACCOUNTABILITY OFFICE

FORUM



HIGHLIGHTS OF
A GAO FORUM

Managing the
Supplier Base in
the 21st Century

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Highlights of GAO-06-533SP.

Why GAO Convened This Forum

The Department of Defense (DOD) and other federal agencies face challenges to maintain suppliers capable of meeting current and future mission requirements. Changing security threats, rapidly evolving science and technology, and budget imbalances have created an uncertain acquisition environment. As DOD, Department of Homeland Security, and others seek to fundamentally transform operations, they are giving contractors increased program management responsibilities to develop requirements, design products, and select major system and subsystem contractors. At the same time, the government workforce that manages and oversees these purchases has decreased. An increasingly global and interconnected defense and commercial supplier base also poses significant acquisition challenges.

To identify and discuss key supplier issues, GAO sponsored a 1-day forum in October 2005 where defense policy experts from federal agencies, defense industry, nonprofit organizations, and academia shared insights into the current supplier base environment. As agreed with the participants, GAO's goal was to engage in a dialog on a non-attribution basis to reach consensus on the top challenges facing agencies as they seek to manage the supplier base. This report provides highlights of the forum.

www.gao.gov/cgi-bin/getrpt?GAO-06-533SP.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Ann Calvaresi-Barr at (202) 512-4841 or calvaresibarra@gao.gov.

HIGHLIGHTS OF A GAO FORUM

Managing the Supplier Base in the 21st Century

What Participants Said

After discussing at length a range of views on the supplier base issues the government faces, participants identified and reached consensus on the top five challenges as well as some potential next steps to address them.

1. Balancing acquisition risks and rewards. Participants noted that DOD's current acquisition policy can discourage small innovative businesses and other suppliers from contracting with the government because of perceived risks such as fixed profit margins, uncertain government funding, and navigating the complex federal acquisition environment. To encourage innovation, spur competition, and provide the government with better acquisition options, participants recommended several actions, including developing a flexible acquisition strategy that distinguishes emerging markets from mature ones and providing rewards that incentivize companies with emerging technologies to take more risks.

2. Difficulty managing U.S. government policies in an international business environment. According to forum participants, the U.S. government has not struck an appropriate balance between the globalizing U.S. supplier base and protecting U.S.-based companies. Participants explained that DOD and other agencies have not clearly identified U.S. industries and technologies to protect. Participants also suggested that the U.S. may overly restrict technology transfers to allies, which may discourage global suppliers to participate in the U.S. supplier base. To reap the benefits from globalization and expand the supplier base while protecting sensitive technologies, participants suggested adjusting the U.S. export control paradigm to reflect differing national security relationships.

3. Defining a strategic supplier management policy. Participants noted that current supplier policy lacks a comprehensive framework to identify and achieve goals. To develop a sound supplier policy, participants recommended that the government clearly identify investment targets, key technologies to develop, and address differences in managing various types of suppliers.

4. Managing multiple tiers of the supplier base. Participants noted that the current lack of visibility into the supply chain complicates efforts to maintain a strong supplier base. To better manage the multi-tier supplier base, participants suggested that DOD improve efforts to collect data on the lower tiers of the supply chain.

5. Workforce skills development and culture change. Participants agreed that the acquisition workforce—a culture resistant to change—is not equipped to manage in a new acquisition environment. To ensure the federal acquisition workforce has the right skills, forum participants recommended that relevant agencies devote attention to identifying and developing the capabilities of the acquisition workforce.

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United States Government Accountability Office
Washington, DC 20548

March 31, 2006

The U.S. industrial base has been instrumental in the U.S. ability to provide the warfighter with the best weapons in the world and maintain military superiority. The Departments of Defense (DOD), Homeland Security and other agencies such as the National Aeronautics and Space Administration have relied on a common supplier base to meet current and future mission requirements. However, due in part to a changing acquisition environment, these agencies face challenges to maintain and manage suppliers. For example, current and new acquisition efforts are expected to be the most expensive and complex ever and are intended to fundamentally transform military operations. Yet poor outcomes result from many of the government's major system acquisitions. The acquisition process slowly delivers systems with cost overruns and seemingly defies reform even as the external environment demands an agile and flexible process that can quickly deliver cost-effective products and services. In addition, DOD and related agencies are increasingly purchasing and relying on supplier services to accomplish agency missions and DOD is giving contractors increased program management responsibilities to develop requirements, design products, and select suppliers. At the same time, the government workforce that manages and oversees these activities has decreased and may lack necessary skills to ensure proper oversight, transparency, and accountability in the acquisition process.

Recognizing that decision makers can greatly benefit from a better understanding of the constraints and challenges DOD and related agencies face to manage the supplier base, GAO convened a forum on October 17, 2005, to identify and discuss key supplier issues. Specifically, GAO's Acquisition and Sourcing Management team sponsored a 1-day forum where defense policy experts from federal agencies, defense industry, nonprofit organizations, and academia shared insights into the current supplier base environment. As agreed with the participants, our goal was to engage in a dialog on a non-attribution basis to reach consensus on the top challenges facing the management of the supplier base. Accordingly, participants identified and discussed key challenges and opportunities confronting DOD and related agencies' management of the supplier base and reached consensus on the top five challenges with some potential next

steps to address them.¹ The forum participants expressed a range of views on the challenges facing the supplier base. After a lengthy discussion, the following were identified as the most significant challenges:

- balancing acquisition risks and rewards;
- difficulty managing U.S. government policies in an international business environment;
- defining a strategic supplier management policy;
- managing multiple tiers of the supplier base; and
- workforce skills development and culture change.

Convening discussions on these issues is just one step toward understanding the challenges faced by the supplier community and identifying areas where constructive action may be taken. While GAO and others have reported in the past on a number of issues raised by the participants, the purpose of this report is to set forth issues that participants identified during the forum and the actions they proposed to improve management of the supplier base, as well as to increase the body of knowledge available on these issues.

The letter provides highlights of the most significant challenges discussed by the participants, as well as subsequent comments we received from them on a draft summary of the discussion. Appendix I describes the scope and methodology used for the forum, appendix II provides a list of the forum participants, and appendix III provides the forum agenda. Appendix IV contains a set of slides presented by GAO at the beginning of the forum. This presentation was designed to provide background information to spur the discussion among forum participants. Appendix V summarizes remarks made by Eileen Giglio of the Defense Acquisition Performance Assessment task force, who was the forum's lunch speaker. Appendix VI contains recent GAO reports and products related to the forum subject matter.

¹ Participants used a consensus-building tool called Nominal Group Technique to identify the top five challenges as an aggregation of the group's judgment.

For more information about this report, please contact Ann Calvaresi-Barr, Director, at 202-512-4841 or calvaresibarra@gao.gov. Other key contributors to this report were John Neumann, William Russell, Terry Richardson and Karen Sloan.

A handwritten signature in black ink that reads "Katherine Schinasi". The signature is written in a cursive style with a large initial 'K'.

Katherine Schinasi, Managing Director
Acquisition and Sourcing Management

Background

In advance of the forum, GAO provided prospective participants the following list of trends to provide context for the forum and to illuminate thoughts on the top challenges.

Changing Acquisition Environment

Continuing DOD transformation from a platform centric acquisition strategy to a more capabilities based, net-centric approach.

- DOD is shifting policy and acquisition approaches to develop systems that are network centric—interdependent components that work together in the field— with system architecture needs that are defined early in programs. These systems are integrated through information systems, relying on software for functionality. New DOD capabilities are often required to be interoperable across military services and use software solutions such as open architectures that increase company challenges to maintain proprietary data and knowledge of software.
- DOD is experimenting with different ways of managing the acquisition of network centric warfare. Missile defense programs employ a “national team” approach to define the overall architecture. The Future Combat System program represents another approach where the lead systems integrator is managing the architecture and the systems that feed into it. In still other cases, DOD uses a systems integrator to define the architecture but manages the acquisition and integration of individual systems into this architecture.

DOD use of and access to commercial products and technologies for systems and programs.

- DOD has access to more nontraditional suppliers using other transactions authority to carry out prototype projects directly relevant to weapons or weapon systems, intended to address challenges of a shrinking industrial base and new threats.
- Commercial sector leads innovation in telecommunications, software, and information systems, increasing the need for DOD to find means to access this technology.
- Commercial firms must consider issues of intellectual property, cost data, and complex acquisition rules when providing products and services to DOD.

Shift to purchasing more services for mission performance rather than spending on military equipment, supplies, and weapon systems.

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- Over the last decade, DOD has outsourced functions performed by military and civilian personnel to commercial services contractors, creating new challenges to establish effective oversight of contractor performance.

Changes in the budget environment.

- DOD has increased utilization of international cooperative programs to develop next generation systems given limited resources.
- U.S. government funding priorities, such as missile defense programs, guide where suppliers can compete for new contracts.
- Mounting costs for the war on terrorism and military pay and benefits force cuts in weapon systems and services contract spending for key programs and missions.
- Striking an affordable balance between current and future needs will be an ongoing challenge, particularly with the federal government's current and projected fiscal imbalance.

Changing global threats require new capabilities, technologies, and communications as well as different tactics.

- Global War on Terror is asymmetric in nature and creating demand for different systems such as non-lethal weapons that may be based on existing commercial products and technologies.
- Current operations are creating the need to translate technologies into fielded systems rapidly.
- DOD is expanding technology demonstration products and exploring alternate approaches for rapidly developing products based on commercial technologies.

Supplier base consolidation.

- As the defense supplier base has consolidated into a few prime contractors, competition has been reduced. As a result, cost containment is more difficult.
- Single source suppliers are more common for components and subsystems.
- Key contractors are selling off defense divisions or exiting the market altogether.
- It is becoming more common to end production of a system before DOD is ready to acquire the follow-on system. When this happens, component and subsystem suppliers disappear from the defense supplier base.

Globalization of suppliers in the defense industrial base.

- Intensified debate over the use of domestic vs. foreign suppliers.
- Challenges and debate related to technology transfer policy, procedures, and protections.
- Uncertainty over ability of the United States to maintain military superiority in critical technology areas.
- Lack of DOD transparency into the supplier base and issues of security of supply.

Forum Discussion

The forum was convened as a springboard to enhance constructive discussions among the supplier community. Our goal in sponsoring the symposium was to have participants discuss the full range of challenges facing the supplier base and come to consensus on the top challenges that need to be addressed collaboratively and to offer actions to address them.

After introductory remarks, a lengthy discussion ensued of the key challenges facing the supplier base. At the close of this discussion, participants identified the top supplier challenges that need to be addressed. The results are as follows:

Top Five Supplier Base Challenges Identified by Forum Participants

- Balancing Acquisition Risks and Rewards
- Difficulty Managing U.S. Government Policies in an International Business Environment
- Defining a Strategic Supplier Management Policy
- Managing Multiple Tiers of the Supplier Base
- Workforce Skills Development and Culture Change

Balancing Acquisition Risks and Rewards

According to forum participants, major actors in the defense supplier base—including prime and lower tier contractors—behave according to perceived risks of contracting with the government. These risks stem from fixed profit margins, uncertain government funding over time, and the potentially high costs for navigating the complex federal acquisition environment. Participants noted that current DOD acquisition policy does not adequately align rewards with market maturity, which can discourage suppliers—especially small innovative businesses—from adopting risks associated with emerging technology markets. Participants also cited

challenges to ensuring accountability in the acquisition system, which can limit the government's ability to balance risks and rewards for suppliers.

Little Distinction in Rewards for Emerging and Mature Markets, Despite Differing Levels of Risk

Participants were concerned that the design of the current acquisition system creates an imbalance between risks and rewards, regardless of the risk level. They described DOD policy as "one size" that does not fit all markets given varying levels of maturity within the defense environment. Participants provided research as an example, suggesting that more reward is needed to support the research marketplace because more risk occurs at the leading edge of research. In the past, contractors accepted single-digit profits in research and development in exchange for double-digit profits in production. However, the relative increase in the cost of research and development has depressed the profit margin. Despite the growth in research and development costs, government procurement policies and strategies have not been adjusted to reflect the increase. And while federal acquisition regulations acknowledge greater risks for research and development, participants felt that this acknowledgement is lost during program implementation. If risks outweigh rewards, suppliers may be discouraged from participating in DOD and related agency contracts.

According to participants, second and third-tier contractors significantly strengthen the supplier base market and provide supplier competition. However, the cumulative effect of insufficient profit margins and the challenge of operating in accordance with complex federal acquisition regulations discourage small and innovative businesses from partnering with the government in emerging markets. As an example, participants cited the obstacles DOD and the Department of Homeland Security are encountering in their efforts to partner with the biotech industry for bio-defense. Biotech companies are finding it difficult to adopt profit margin limits, cost accounting standards, and other requirements that traditional prime contractors follow.

Participants noted that the current acquisition environment has distorted normal economic incentives. Pervasive fear of failure has discouraged government procurement employees from taking the risks necessary to maximize quality and minimize cost and has created a mindset that considers not failing a measure of success. As an example, participants pointed to the considerable press and oversight scrutiny procurement staff face if they fail to prevent high supplier profits. This emphasis on limiting supplier profit could ultimately result in higher costs to the taxpayer if the supplier lacks the incentives to deliver the highest quality product or service at the lowest cost.

Participants also found suppliers have distorted economic incentives that contribute to acquisition risks. For example, suppliers tend to intentionally underbid for contracts knowing once a program is established the government is not likely to terminate it in response to cost overruns because of political considerations.

Participants were also concerned that as markets develop, late comers and smaller companies are forced out in favor of larger, more established firms. In addition, participants found that DOD was not effectively providing companies with opportunities to compete for contracts once programs had started. They suggested methods such as spiral development,¹ which seek to keep a platform technologically and operationally up to date while it's being built, to increase competition opportunities, reduce risk, remove barriers to competition and innovation, and ultimately provide the government with better acquisition options.

Lack of Transparency and Accountability in Current Acquisition Environment Could Undermine Efforts to Balance Risks and Rewards

Although participants agreed that the existing acquisition system creates an imbalance between risks and rewards, they noted that a lack of accountability could thwart efforts to reform the system. Participants have observed that accountability for DOD's acquisitions occurs at the higher levels of the organization and is too diffuse to easily hold people accountable. The accountability chain from the executive level to the program manager is also blurry, and responsibility cannot be adequately determined.

According to participants, the accountability chain becomes clearer at the program management level, but participants warned that focusing accountability at this level can be risky. Program managers often lack complete authority over the project, are under funded, or encounter unstable program funding and must accept bad acquisition choices from officials throughout the organization. High turnover rates of DOD program managers can also undermine accountability because a manager's actions cannot be readily linked to program performance.

¹ A spiral development program is defined in section 803 of the Defense Authorization Act for Fiscal Year 2003 as a research and development program conducted in discrete phases or blocks, each of which will result in the development of fieldable prototypes and will not proceed into acquisition until specific performance parameters, including measurable exit criteria, have been met.

Participants were also concerned that the federal government may be outsourcing program management and other inherently governmental functions without oversight. For example, DOD and related agencies have provided contractors with more authority to achieve program goals through the lead system integrator process. However, participants noted it is unclear how oversight and accountability concepts are incorporated to the contractor's expanded role.

Actions to Address Better Balance between Acquisition Risks and Rewards

To encourage innovation, spur competition, and provide the government with better acquisition options, forum participants recommended the following actions:

- *Develop a flexible acquisition strategy for innovative products and services.* This policy should differentiate between emerging and mature markets and provide rewards that incentivize companies engaging in research and development efforts to take more risks. Since profit is the prime motivation for companies, participants suggested that DOD set up incentives that meet the best interests of industry based on the maturity of the market and government based on the need for the technology and best value for cost. For example, the government could allow higher profits to companies that pursue technologies in emerging markets that require more risk to develop. In the participants' view, this would provide more incentives for companies to conduct basic research. One participant suggested that research and development should be a stand-alone business that is profitable for companies. Some participants suggested that the Department of Homeland Security might offer a good environment for experimentation and reform of old government acquisition strategies and practices.
- *Use market maturity to guide expectations regarding competition.* For instance, in mature markets, a small number of suppliers is typical because of obstacles to overcome barriers to entry, such as the significant cost required to establish business infrastructure. By contrast, in emerging markets DOD and related agencies should expect multiple competitors and align incentives to best achieve market competition.
- *Target investments into needed emerging technologies and maintain open and honest dialogues with companies that produce such technologies.* An industry participant offered that DOD and other stakeholders could target investment in areas of needed technology and may consider competing technology to provide incentives to the supplier base. One participant offered that partnerships between government and industry can help balance risks and rewards. Contractors, congressional staff, and program officials need to seek stakeholder agreement. One participant added that a non-partisan

committee comprised of defense experts would be helpful to identify critical technology areas to pursue or preserve.

- *Develop a small business strategy to provide funds for small businesses rather than prime contractors.* These investments should be targeted where technologies are needed. Participants stressed that a key to this strategy is monitoring the actual dollars that go to small businesses rather than percentages of individual contracts set aside for small businesses. Participants explained that by taking a different approach to monitoring small business funds, DOD and related agencies can adjust strategies to attract innovative companies and positively influence company make or buy decisions.
- *Tailor government strategies for acquisition.* Participants suggested policies to get small innovative companies to join the defense industrial base that correspond with acquisition cycle milestones. For instance, DOD could improve use of spiral development, which allows suppliers entry into existing programs by incorporating new technologies into platforms once designed or in production. Spiral development could help to minimize risk and establish relationships with new innovative small businesses. One participant explained that, while past contractor performance needs to be relevant, it should not be a barrier to compete for defense contracts. However, some participants expressed a personal frustration with using cost as a primary driver for selecting contracts. Instead, participants suggested that the government should use past performance as the primary selection criterion to help ensure that poor performing suppliers are not re-employed simply by underbidding other suppliers. As a result, if a supplier fails to perform well, it should have to pay some price to enable it to compete in the future.
- *Calibrate the acquisition system to accommodate the mutual interest of both the government and industry through the use of multiyear funding.* Participants explained that under multiyear contracts, contractors share risk with the government. For example, when the C-17 and F-18 programs converted to multiyear funding, each contractor received money in advance and shared risk with the government. These efforts contribute to agreement between parties in the beginning of the acquisition process to reduce unexpected outcomes.
- *Consider contractor capabilities to maintain multiple sources.* As part of the acquisition framework, the government could identify opportunities and use tools to cultivate suppliers and consider partnering opportunities to develop flexible capabilities. Components of a framework might include greater use of competitive sourcing and other measures such as best practices to increase innovation, efficiency, and effectiveness. It may also be useful to broaden the system to allow each military department to look beyond its individual

programs to identify suppliers in other military service programs capable of providing similar capabilities in order to maintain multiple sources.

To improve accountability and oversight, participants recommended that the following actions be taken:

- *Establish clear lines of authority.*
- *Provide more transparency over the outsourcing of inherently governmental functions.* Greater transparency is needed in program management, accountability, and oversight responsibilities.
- *Provide for timely oversight.*
- *Balance oversight with mechanisms to achieve government goals.* Create acquisition strategies that increase accountability in the supplier base while enabling the government to develop mutually beneficial partnerships with contractors to produce higher quality products and lower costs. For example, industry associations could create common government and industry accountability processes.
- *Establish metrics that assess capabilities delivered and management of cost, schedule, and performance issues.* While earned value management techniques are valuable, other techniques are needed to assess program progress. Additional metrics would help DOD and related agencies to better evaluate contractor performance when considering the award of new contracts.

Difficulty Managing U.S. Government Policies in an International Business Environment

According to forum participants, the U.S. government has not struck an appropriate balance between the globalizing U.S. supplier base and protecting U.S.-based companies and technologies. Participants explained that DOD and other agencies have not clearly identified industries and technologies to protect. In addition, participants noted that DOD has not determined the effectiveness of existing protectionist legislation in maintaining the industrial base. Moreover, participants noted that the United States may overly restrict technology transfers to allies and discourage global suppliers from participating in the U.S. supplier base.

Balancing Globalization while Protecting U.S. Economic Interests

The concern among participants is that the government's protectionist tendencies are preventing DOD and other agencies from taking advantage of global suppliers that can yield greater quality items at lower costs than domestic suppliers and, as a result, help strengthen the U.S. supplier base. Foreign suppliers have an interest in participating in the U.S. industrial base since the U.S. defense budget is by far the largest in the world. However, some participants noted that by limiting access to foreign suppliers, the U.S. government may be driving international suppliers

away and creating disincentives for foreign governments to use U.S. suppliers. For example, one participant noted that U.S. foreign sales help keep the industrial base viable by allowing companies to continue to sell items once the U.S. military has completed its purchases—as is the case with the F-16. Without foreign military sales, F-16 production lines would have shut down. One participant asserted that defense spending for economic reasons was put in place to maintain a viable domestic industrial base, while others questioned whether such policies make sense today or are best suited to develop markets for the supplier base.

Participants also noted that U.S. decisions and legislation on industries to protect are not always based on the best research or on complete and accurate information to understand the impact of actions. One participant indicated that domestic source restrictions such as the Berry Amendment have created additional barriers to DOD and related agencies use of commercial firms. Second, evaluating the effectiveness of the government’s policies to protect industry is difficult as DOD has not been able to articulate the causes and effects of these policies. Finally, current policy makes it difficult to determine how to define a domestic company. As an example, one participant pointed out that his company is American-owned, but a significant portion of the company’s engineers are located in foreign countries. In some cases, communications and operations have been hampered by U.S. export controls, which place limits on the types of information that can be shared between U.S.-based and foreign-based engineers, regardless of whether they are employed by the same company.

Challenges in Identifying Industries and Technologies to Protect

Participants focused on the negative effects of imposing national goals in an international economy, citing two areas—technology transfers and reliance on foreign industry. A key concern cited by participants is where to draw the line between technologies that should be protected and technologies that can be exported. One participant observed that the United States restricts technology transfers even with our close allies, which can hamper cooperation in coalition warfare and limit the compatibility of military capabilities. In addition to technology transfer concerns, participants agreed that the U.S. government must develop policies to prevent it from becoming vulnerable to foreign governments. However, they also believe that the government must accept a level of dependency on foreign industry, given an increasingly global economy in which the United States does not possess a competitive advantage on all the goods and materials that it needs. Several participants suggested that the U.S. government has not decided what its strategic national and industry resources should be and that efforts to do so can be affected by the political environment. As a result, the United States may lack

information needed to inform decisions on which industries to protect and what technology may be transferred.

Actions to Encourage Globalization While Protecting Sensitive Technologies

To encourage globalization and expand the supplier base while protecting sensitive technologies, forum participants recommended the following actions:

- *Focus on keeping U.S. products competitive globally instead of maintaining and protecting the U.S. industrial base.* By tapping into foreign suppliers, participants felt that the United States might open new avenues for domestic suppliers. One participant noted that many other countries have protected their industrial base, but have failed at keeping their products competitive in the global market. The key, participants thought, is to protect the dynamism of the system, not a particular product, company, or industry. One way would be to take a venture capitalist approach to invest in the industrial base and provide an environment in which companies can compete and access new markets. These efforts would need to be based in research to avoid unintended consequences and would require more dialogue to inform and educate decision makers, such as Congress, on restrictions pertaining to technology transfers.
- *Adjust the export control paradigm to reflect differing national security relationships.* At a minimum, the structure should treat close allies differently, with greater dialogue between Congress and provider countries. There should be a system in place that capitalizes on the coordination and cooperation between trusted allies, enabling foreign suppliers from such nations to add a competitive dimension to the supplier base from which the government draws. One participant added that the United States can learn from the export control programs of other countries that have similar characteristics but different laws.
- *Better identify the risks of foreign dependency.* Reliance on a foreign source does not necessarily result in vulnerability for the United States. The United States could balance risks by focusing on key allies that it could rely on under most conceivable circumstances.
- *Create a strategy that brings the defense community together to define and determine key technologies and capabilities to focus on and then collectively take action in those areas.* This effort would include assessing risks and imposing technology transfer controls where necessary.
- *Change the acquisition culture to embrace a global export environment and approach the global marketplace more optimistically.* A government participant stated that, if an ultimate goal is to expand the supplier base, the government and suppliers will need to tear down barriers and reach beyond their traditional domestic partners to access the global supplier market. Spend analyses could help identify where industry could achieve

more efficiencies by relying on a global industrial base, including Canada and the United Kingdom.

- *Adjust policies to reflect the ambiguous nationality of emerging multinational companies.* One participant mentioned that BAE North America is a good example of a defense company that is United Kingdom-owned but has major operations in the United States. Given the company's operations in both countries, efforts to comply with export control restrictions and other technology transfer issues can be burdensome and complicated.

Defining a Strategic Supplier Management Policy

The third challenge identified by forum participants is the lack of a strategic policy to manage suppliers. Participants characterized DOD's current policy as a default position that is based on thousands of individual contracts and, as such, lacks a comprehensive framework to identify and achieve goals. In addition, participants explained that current policy does not distinguish between purchasing goods and services. Participants also noted DOD difficulties in encouraging companies to conduct research and development and cited a lack of consensus on what markets to develop. Additional challenges cited include providing clear requirements to suppliers and maintaining competition in the supplier base.

With its significant buying power—particularly in the aerospace and defense markets—the U.S. government has the ability to shape markets based on the way it spends money and awards contracts. Participants agreed that, with this power, the government has a responsibility to define a supplier management policy that provides suppliers with a roadmap for future needs. As regulator, buyer, and financier for suppliers, the government needs to set out a framework, but some participants noted that the often fragmented U.S. policymaking and procurement processes challenge efforts to develop an effective supplier policy. For example, one participant noted that the government is too focused on restricting industry profit rather than formulating innovative ways to expand the supplier base.

In discussing DOD and related agency supplier management policy, participants were concerned that the current acquisition process is primarily geared toward acquiring goods not services, despite the differences between acquiring goods and services and the increase in services contracting. One participant also noted that policymakers are not providing coherent policy signals to reflect important trends, such as increased buying of services and increased wartime spending. For

example, policymakers have emphasized buying commercial-off-the-shelf goods but have not similarly addressed service trends.

A lack of consensus on what markets to develop creates challenges in defining a coherent supplier management policy. According to participants, Congress and DOD lack mechanisms to achieve consensus on what markets to develop to best meet supplier needs. DOD policy fails to consider the significant differences between mature technology markets and research and development markets in managing suppliers. DOD and related agencies have not focused on reducing the barriers that prevent lower-tier suppliers from entering the defense supplier base, such as export controls, the cost of federal acquisition regulation legal expertise, and government cost accounting standards. As an example, one participant pointed to the difficulty a large defense supplier had in complying with federal cost accounting standards. Ultimately, the company divided its accounting systems—one for its government clients and one for its private-sector clients—to comply with federal standards. Participants were concerned that the burden of such a restructuring could prevent small businesses from entering the defense market. Even if small businesses could weather such burdens, smaller companies tend to be edged out by larger, more established firms as markets develop.

Changes in weapon program requirements also present another significant barrier for suppliers. Participants noted that changing requirements hamper the ability of small businesses to meet DOD needs. In addition, without clear and stable requirements, DOD and related agencies may not achieve commonalities across related systems.

Actions to Develop a Sound Supplier Management Policy

To develop a supplier management policy, forum participants recommended the following actions:

- *Develop a single, broad, goal-based supplier management policy.* This policy should: (1) clearly identify the investments the government wants to target and what is to be achieved; (2) include a vetting process to identify key technologies to develop; and (3) address differences between managing various types of markets, such as products versus services, and mature technologies versus research and development. Participants agreed that ensuring that the policy is broadly defined and goal-based is imperative to avoid limiting options.
- *Provide adequate incentives to experiment with policy alternatives.* One participant suggested that policymakers work through a range of relevant

agencies such as the Department of Homeland Security to develop supplier management policy rather than forcing policy through DOD.

- *Instill discipline to DOD's requirements generation process to ensure that requirements are properly defined so that contractors can execute requirements.* Participants observed that DOD's committee on jointness is supposed to be rationalizing requirements, but suggested that the process could be improved. One participant added that prime contractors could get more involved in DOD's Small Business Innovative Research program to aid in requirements definition and management.

Managing Multiple Tiers of the Supplier Base

The fourth challenge identified by forum participants is for DOD and relevant agencies to better manage the multiple tiers of the supplier base. Participants noted that the current lack of visibility into the supply chain complicates efforts to maintain a strong supplier base.

Participants highlighted the need for greater visibility into the supply chain to monitor lower tier suppliers—where most technological innovation takes place. According to one participant, an estimated 280,000 companies comprise the government's industrial base, but the focus of defense acquisition policy is on a handful of prime contractors. Another participant noted that a lack of data prevents prime contractors—a key ally in managing the supplier chain—from diversifying and developing lower tiers to maintain competition. Another participant suggested the need for variability in the supply chain, however without more information on lower tier suppliers, variability would be difficult to monitor.

Finally, participants discussed the importance of promoting competition in managing multiple tiers of the supplier base. Participants noted that competition drives quality and innovation. However, participants have found that while the government acknowledges that the market should be as competitive as possible, it has not established an overarching framework that outlines competition goals making it difficult to achieve robust competition. A significant problem arises in sole sourcing when there is no viable alternative to compete and drive up innovation and quality, and drive down cost. Other participants noted that joint ventures between prime contractors can limit competition and increase risks that the government will purchase redundant systems. While the government has taken some action toward improving competition through legislative measures, it has not devised a policy framework centered on supplier competition. For instance, one participant questioned whether the government needs to develop two missile defense systems to ensure competition or does it simply need a better way to drive competition.

Actions to Better Manage the Multiple Tiers of the Supplier Base

To help small innovative businesses enter and thrive in a multi-tier market and stimulate competition, forum participants recommended the following actions:

- *Increase government visibility into lower tier suppliers*—increase investment in them and decrease barriers to their participation in government contracts. Participants observed that a first step could be to identify the total number of companies in the defense industrial base. Participants suggested that DOD develop a reporting system for the multiple tiers of the supplier base. Other participants suggested the need for the Office of the Secretary of Defense to fund a study on the supplier base and provide seed money to small companies to innovate and join government procurement.
- *Pool federal and state funds for small businesses to invest in new technologies*. This effort would provide a valuable source of technological innovation for the government and an opportunity for economic gains by small businesses.
- *Increase and maintain competition to keep companies viable*. To increase competition, participants suggested the government compete different products that meet similar needs or compete shares of a project's total cost, such as logistics—which is a large portion of DOD's acquisition, technology, and logistics budget. To maintain competition, the government could provide a certain level of business to the competitors of the contract winner. Awards to losing suppliers could include research and development investments or a contract for another product. The government should also encourage prime contractors to diversify their suppliers and promote competition.

Workforce Skills Development and Culture Change

The fifth challenge identified by forum participants concerns the need to further develop the skills of the acquisition workforce to address today's acquisition challenges. Participants agreed that the acquisition workforce is not equipped to manage in a new acquisition environment. Participants cautioned, however, that implementing reforms would be difficult because the acquisition workforce culture is resistant to change.

Workforce Not Equipped to Manage in New Acquisition Environment

The federal government is increasingly outsourcing the production of goods and delivery of services to attempt to take advantage of the efficiency, effectiveness, and innovation achieved by private companies competing in a free market. As the government continues to rely on the private sector to conduct its business, the federal acquisition workforce must be able to make business judgments and apply critical thinking to each contract. The acquisition workforce, however, has not been

structured or trained to work in a business environment. To competently negotiate contracts, the workforce must obtain an understanding of global trends and greater business acumen to make business judgments rather than relying on acquisition rules and regulations.

Participants have observed that the current federal acquisition workforce significantly lacks the new business skills needed to act as contract managers and not as contract processors. Until recently, DOD acquisition professionals were not required to have an undergraduate degree. Acquisition professionals who buy services suffer from an even greater skill gap, due to the emphasis DOD has placed on training staff to purchase major goods, such as weapons or vehicles, and the increasing sophistication of the services that the government procures. One participant described the government contractor of “old times” as someone who worked on five different platforms and was highly skilled. Now, the government wants someone with business acumen and who is adept at risk management. One participant observed that we need to rethink who is put into key leadership positions and what traits they need to have and suggested these skills might be business-related. Other participants stated that there needs to be a shift in talents and skills sought toward partnering with and managing private-sector firms.

Changing Current Workforce Culture Is Difficult

Given the rule-bound culture surrounding federal government acquisitions, forum participants warned that reform would not be easy. According to participants, the combination of penalties for acquisition failures along with defining program success as not failing has contributed to a risk-averse culture that is less focused on outcomes. The danger, participants pointed out, is that risk aversion leads to distorted economic reasoning, causing acquisition officials to seek the lowest profit providers even if they do not provide the lowest cost commensurate with quality. Participants added that with years of operating in a risk-averse environment, program managers and government acquisition officials do not feel empowered to take risks and are resistant to change.

Some participants suggested that DOD’s risk-averse culture has been molded by out-of-date acquisition training. Currently, acquisition officers and enlisted personnel are taught to identify and avoid risk. Moreover, acquisition workforce numbers have been reduced with a trade-off occurring between technical and labor experts. Together, these factors create significant challenges in creating an environment that encourages innovation.

Actions to Develop Workforce Skills and Effect Reforms

To ensure the federal acquisition workforce has the right skills to partner with the private sector and to bring about a culture change, forum participants recommended the following actions:

- *Devote attention to identifying and developing the capabilities of the acquisition workforce.*
- *Rotate acquisition professionals from the private-sector into the public sector.* Public-sector professionals working with private-sector professionals can learn more efficient buying practices and serve as change agents for the rest of the procurement workforce.
- *Employ acquisition strategies that promote innovation rather than risk-averse approaches currently used.* Developing a better understanding of profit, the time value of money, and the interface of government and industry can help the acquisition workforce to manage programs rather than avoid failure. In addition, increasing pressure should be applied to acquisition staff to allow integration of new technologies into programs.

Appendix I: Scope and Methodology

We identified and invited 15 experts to participate in a day-long Supplier Base Forum on October 17, 2005. Fourteen attended the meeting.

We conducted extensive literature and internet searches and attended conferences of subject matter interest to identify potential experts to participate in the forum. Based on these sources as well as meetings with subject matter experts on defense supplier issues from GAO, we determined that participants should be drawn from eight areas: prime defense contractors, second and third tier suppliers, industry groups, non-profit organizations, academia, relevant government agencies, non-traditional suppliers, and international defense suppliers. We generated a potential participant list and considered types and levels of experience, as well as whether the participant was recognized in the professional community or had professional affiliations. We then examined the preliminary list of potential participants and selected a number of experts with recognition in the professional community, published work relevant to defense supplier issues, current or past employment with a defense supplier, relevant government agency, or commercial experience with a global supplier base. We subsequently condensed our list and made final selections by giving consideration to potential participants who had multiple areas of expertise to contribute.

The overall purpose of this forum was to gain insight into key challenges confronting DOD and related agencies to manage the supplier base and to reach consensus among a diverse group of experts regarding the top challenges and potential next steps to manage them.

A nominal group approach was used to identify and develop consensus on the most important challenges. Time was allocated on the agenda for the group, as a whole, to identify and discuss key supplier challenges in general with no limit as to the number or types of challenges. More than 60 items were discussed. Forum participants collapsed these items into eight separate challenges. To identify and develop consensus about which were the most important challenges, each participant individually ranked the five most important challenges from this final list of eight.

Based on the rank order, each selection was weighted. Specifically, the most important challenge received 5 points, the second most important received 4 points, the third most important received 3 points, the fourth most important received 2 points, and the fifth most important received 1 point.

Points were summed, and through this consensus-building process the list of eight challenges was numerically rank ordered from the most important to the least important. A natural break occurred between the fourth and fifth item. Members were given an opportunity to reflect on the final outcome. All participants thought the final result captured the top challenges.

Appendix II: Forum Participants

Jeff Bialos	Partner, Sutherland, Asbill, and Brennan; Executive Director, Program on Transatlantic Security and Industry at the Center for Transatlantic Relations, School for Advanced International Studies, Johns-Hopkins University
Pierre Chao	Senior Fellow, Director Defense Industrial Initiatives, Center for Strategic and International Studies
David Chesebrough	President, Association for Enterprise Integration
Alan Chvotkin	Senior Vice President and Counsel, Professional Services Council
Vice Adm. Joe Dyer (USN ret.)	Executive Vice President, General Manager, Government and Industry Division, iRobot
Daniel Else	Analyst in National Defense, Foreign Affairs, Defense, and Trade Division, Congressional Research Service
Hon. Jacques Gansler	Vice President Research, Director, Center for Public Policy and Private Enterprise, University of Maryland
Bob Gower	Vice President, Supplier Management Operations, Boeing Integrated Defense Systems
John N. Hatch	Corporate Vice President, Global Supply Chain Management, Lockheed Martin
John Kraynak	Director Strategic Sourcing, BAE Systems North America
Terry Little	Executive Director, Missile Defense Agency
Sydney Pope	Industry Analyst, Office of Deputy Undersecretary of Defense for Industrial Policy
Al Sligh	Director Strategic Sourcing, Department of Homeland Security
Jennifer Stewart	Director General, Defense Procurement, Embassy of Canada

Appendix III—Forum Agenda

8:30am	Check-In/Coffee
9:00am	Welcome —Katherine Schinasi, Managing Director, Acquisition and Sourcing Management Team
	Introductions and Forum Ground Rules —Ann Calvaresi-Barr, Director ASM
9:30am	Panel Discussion of Key Challenges —identify key supplier challenges
10:45am	Break
11:00am	Panel Discussion —discussion continued, refinement of issues, reach consensus of top challenges (voting)
12:15pm	Lunch, Guest Speaker: Ms. Eileen Giglio, Deputy Director, Defense Acquisition Performance Assessment Project, Department of Defense
1:30pm	Panel Discussion —results of top challenges and identification of next steps ASM Directors join panel
3:00pm	Adjournment

Appendix IV: Supplier Base Forum Slide Presentation

GAO FORUM

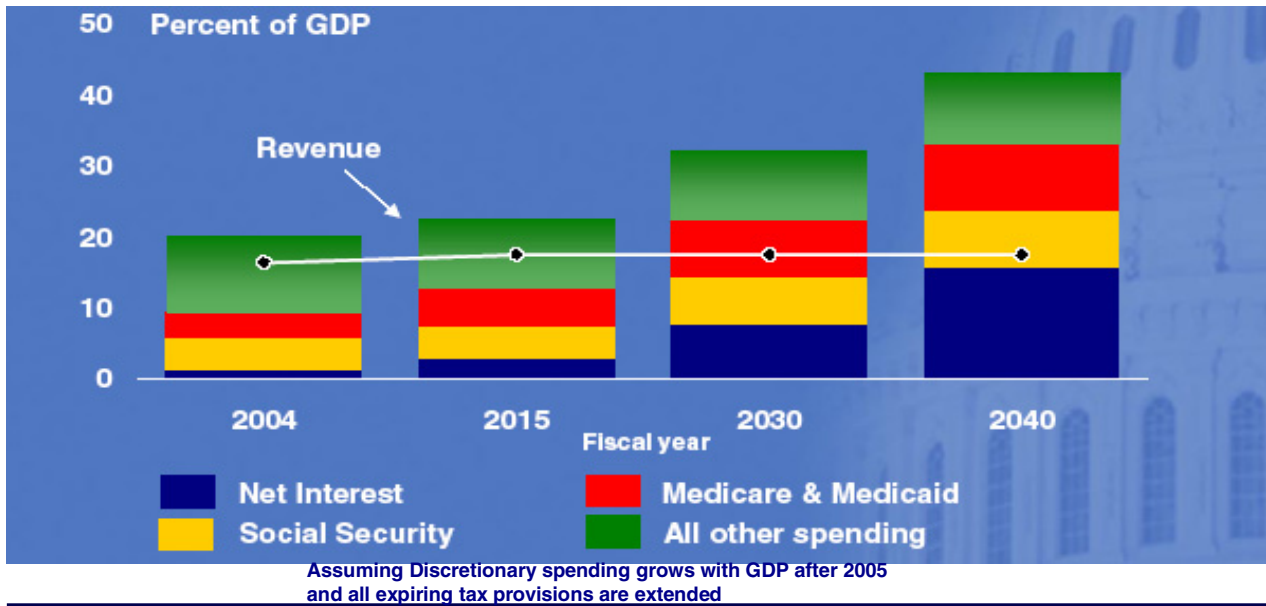
Managing the Supplier Base in the 21st Century

October 17, 2005

Acquisition Environment

Budgetary Constraints

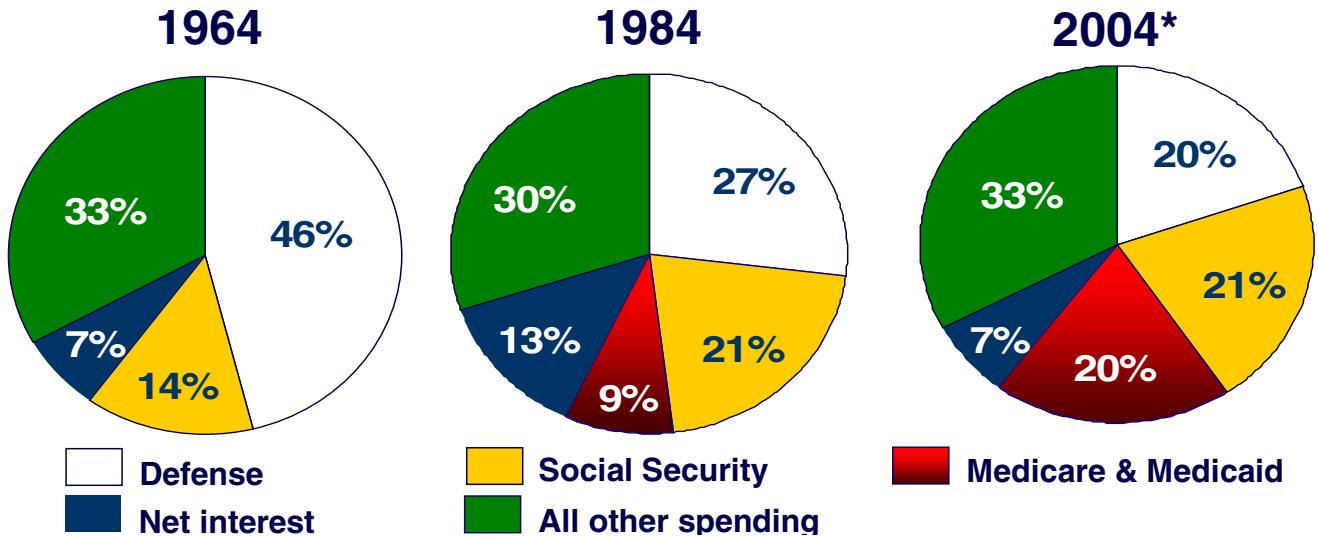
Spending as a Share of GDP



Acquisition Environment

Budgetary Constraints

Composition of Federal Spending



*Current services estimate.

Note: Numbers may not add to 100 percent due to rounding.

Source: *Budget of the United States Government, Fiscal Year 2005* (February 2004) and *Budget of the United States Government, Fiscal Year 2005, Mid-session Review* (July 2004), Office of Management and Budget.

GAO's Acquisition and Sourcing Management Team

- ASM's mission is to help make the government as effective as possible in acquiring the goods and services it needs to carry out government operations, meet national security needs, and fulfill social and policy objectives.
 - To succeed in our mission, we focus our work with the aim of:
 - Improving the government's ability to acquire sophisticated weaponry, space systems, and other goods and services in a globalized economy;
 - Minimizing contracting risks faced by government agencies;
 - Improving DOD access to efficient suppliers with technologically superior products;
 - Enhancing the efficiency of government operations.
-

Selected Issues from GAO's High Risk List 2005

- DOD Weapon Systems Acquisition – 1990
 - NASA Contract Management – 1990
 - DOD Contract Management – 1992
 - Management of Interagency Contracting – 2005
-

21st Century Challenges

REEXAMINING THE BASE OF THE FEDERAL GOVERNMENT

- National defense
 - Do we need new ways to identify and protect critical technologies?
 - What is the appropriate role for contractors, especially in forward deployed and conflict areas?
 - Governance
 - Should the government's approach to using the private sector be modified to improve results and reduce costs?
-

Supplier Environment?

- Business of government increasingly performed by private sector
 - Smaller government workforce to manage and oversee government purchases
 - Shift to purchasing more services for mission performance rather than spending on equipment and supplies
 - National Security Dynamics
 - Global threats and global suppliers
 - Traditional supplier base consolidation
 - Relevance of commercial products and technologies
-

Appendix V: Summary of Lunch Speaker Remarks

Eileen Giglio, Deputy Director of the Defense Acquisition Performance Assessment (DAPA) project, provided an overview of the challenges identified in its work and began her comments by noting the similarity of issues raised at the forum with findings identified in the DAPA effort. She noted that acquisition processes have significant shortcomings leading to loss of confidence by Congress and the defense community. She summarized a few of the problems as: increased cost overruns, failure to establish acquisition priorities and trade-offs, undefined operational requirements and performance characteristics, untested and undetermined technology risks, and a lack of centralized responsibility and empowered authorities.

Based on the work to date of the DAPA project, she outlined where constructive actions may be taken to address acquisition problems. First, she highlighted the budget process and asked what can be done differently to make the process more lean and simple. In terms of requirements, she noted that DOD needs to recover stability and focus on realistic capabilities and expectations in step with technological developments. Her last point centered on the acquisition process and suggested the need for reforms that will resolve cost and schedule overruns and achieve transparency and predictability in the process. She also suggested that DOD apply lessons learned from past acquisition reviews to adapt to changing environments and adjust its acquisition organization. Other points included:

- Workforce - Recover workforce expertise and establish accountability.
- Industry – Enhance the relationship between the Department and Industry partners to build trust and reduce risk.
- Leadership – Simplify the lines of authority, incentivize performance and require accountability across the acquisition community.

Ms. Giglio concluded her remarks by noting that effective change will only result from an ongoing cooperative effort between the government, industry, and Congress.

Appendix VI—Related GAO Products

Joint Strike Fighter: Management of the Technology Transfer Process. [GAO-06-364](#). Washington D.C.: March 14, 2006.

Defense Acquisitions: DOD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes. [GAO-06-66](#). Washington, D.C.: December 19, 2005.

Defense Procurement: Air Force Did Not Fully Evaluate Options in Waiving Berry Amendment for Selected Aircraft. [GAO-05-957](#). Washington D.C.: September 23, 2005.

Defense Ammunition: DOD Meeting Small and Medium Caliber Ammunition Needs, but Additional Actions Are Necessary. [GAO-05-687](#). Washington D.C.: July 27, 2005.

Industrial Security: DOD Cannot Ensure Its Oversight of Contractors under Foreign Influence Is Sufficient. [GAO-05-681](#). Washington D.C.: July 15, 2005.

Defense Microelectronics: DOD-Funded Facilities Involved in Research Prototyping or Production. [GAO-05-278](#). Washington D.C.: March 11, 2005.

Defense Trade: Arms Export Control System in the Post-9/11 Environment. [GAO-05-234](#). Washington D.C.: February 16, 2005.

Federal Procurement: International Agreements Result in Waivers of Some U.S. Domestic Source Restrictions. [GAO-05-188](#). Washington D.C.: January 26, 2005.

Industrial Security: DOD Cannot Provide Adequate Assurances That Its Oversight Ensures the Protection of Classified Information. [GAO-04-332](#). Washington D.C.: March 3, 2004.

Joint Strike Fighter Acquisition: Cooperative Program Needs Greater Oversight to Ensure Goals Are Met. [GAO-03-775](#). Washington D.C.: July 21, 2003.

Best Practices: Setting Requirements Differently Could Reduce Weapon Systems' Total Ownership Costs. [GAO-03-57](#). Washington, D.C.: February 11, 2003.

Defense Acquisitions: DOD Has Implemented Section 845 Recommendations but Reporting Can Be Enhanced. [GAO-03-150](#). Washington D.C.: October 9, 2002.

Export Controls: Processes for Determining Proper Control of Defense-Related Items Need Improvement. [GAO-02-996](#). Washington D.C.: September 20, 2002.

Defense Trade: Mitigating National Security Concerns under Exon-Florio Could Be Improved. [GAO-02-736](#). Washington D.C.: September 12, 2002.

Best Practices: Capturing Design and Manufacturing Knowledge Early Improves Acquisition Outcomes. [GAO-02-701](#). Washington, D.C.: July 15, 2002.

Defense Acquisitions: DOD Faces Challenges in Implementing Best Practices. [GAO-02-469T](#). Washington, D.C.: February 27, 2002.

Best Practices: Better Matching of Needs and Resources Will Lead to Better Weapon System Outcomes. [GAO-01-288](#). Washington, D.C.: March 8, 2001.

Best Practices: A More Constructive Test Approach Is Key to Better Weapon System Outcomes. [GAO/NSIAD-00-199](#). Washington, D.C.: July 31, 2000.

Defense Acquisition: Employing Best Practices Can Shape Better Weapon System Decisions. [GAO/T-NSIAD-00-137](#). Washington, D.C.: April 26, 2000.

Best Practices: DOD Training Can Do More to Help Weapon System Program Implement Best Practices. [GAO/NSIAD-99-206](#). Washington, D.C.: August 16, 1999.

Best Practices: Better Management of Technology Development Can Improve Weapon System Outcomes. [GAO/NSIAD-99-162](#). Washington, D.C.: July 30, 1999.

Defense Acquisitions: Best Commercial Practices Can Improve Program Outcomes. [GAO/T-NSIAD-99-116](#). Washington, D.C.: March 17, 1999.

Defense Acquisition: Improved Program Outcomes Are Possible. [GAO/NSIAD-98-123](#). Washington, D.C.: March 17, 1998.

Best Practices: DOD Can Help Suppliers Contribute More to Weapon System Programs. [GAO/NSIAD-98-87](#). Washington, D.C.: March 17, 1998.

Defense Trade: Weaknesses Exist in DOD Foreign Subcontract Data. [GAO/NSIAD-99-8](#). Washington D.C.: November 13, 1998.

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