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CIVIL-MILITARY INTEGRATION: THE CONTEXT AND URGENCY

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As defense budgets decline, progress in acquisition reform advances, and worldwide emerging threats become apparent, the need is obvious for a strong industrial base to maintain our economic and military strength and retain our position of global leadership in the 21st century. It also becomes clear that our success depends on integrating the civil and military sides of industry. We need only change the rules to find that solution.

There are times when the relentless pace of activity surrounding us can disguise the obvious. What should be clear sometimes appears only after it has been placed in a context that will make it stand out. With the fast pace of acquisition reform initiatives commanding our attention today, the concept of civil-military integration (CMI) may be less than obvious. To appreciate CMI, we must place it in the context of today's changing economic and global environment. There are opportunities available through CMI that can produce benefits for defense, industry, and the nation as we position ourselves for global leadership in the 21st century.

Recent procurement legislation and other government initiatives have eliminated some of the barriers to a more streamlined acquisition process. At the

same time, the Department of Defense (DoD) continues to struggle with how to modernize weapon systems for the 21st century in the face of a defense budget that has declined dramatically in the past 15 years. A significantly downsized defense industrial base is looking for growth, which is hard to find in the defense sector, but is emerging for the civil and commercial aviation and space and communications sectors. The common denominator and solution offered for these pressures is CMI.

SEPARATION OF MILITARY AND COMMERCIAL SECTORS

Separation of the military and commercial sectors of industry has been cultivated carefully over time. The laws and

regulations governing the government acquisition process, which were developed to prevent favoritism, promote public policy, and ensure proper use of the taxpayers' dollars through best-value solutions, are unique. They require the contractor to develop complex, sophisticated business systems to comply with government requirements for cost accounting, the Truth in Negotiations Act (TINA), and government property accountability, among a myriad of others.

Participation in the government defense business, therefore, comes with an added expense for these compliant business systems, as well as exposure to scrutiny and unique legal liabilities not neces-

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sarily found in the commercial business world. The added expense is one that is not required for commercial busi-

nesses and is a burden that can affect a contractor's competitiveness. As a result, many companies choose between participating in the commercial and defense business sectors. Other companies choose to participate in both sectors, separating their defense and commercial businesses into different segments within the company and creating separate business systems to meet government requirements.

The costs of these unique requirements are included in the price of products and services purchased by the government. For example, the 1994 Coopers & Lybrand study on the defense regulatory cost premium assessed the cost of compliance with unique DoD requirements at 18

percent. This premium is passed on to the government in the costs of defense.

DECLINING DEFENSE BUDGET

During the Cold War years, the United States had a strong defense budget. This environment changed quickly with the fall of the Berlin Wall in November 1989. The Soviet Union ceased to exist and with it the significant threat to global peace. Democracy and capitalism were introduced into Eastern Europe and the Confederation of Independent States (CIS). The United States was left as the remaining superpower.

The absence of the Cold War caused a reevaluation of evolving defense threats, with a corresponding redefinition of defense roles and missions. In addition, there has been a balancing of national interests throughout the budget process of the 1990s. The defense portion of the budget has declined, giving way to other national needs and priorities. Figure 1 provides a breakout of the allocation of the fiscal year 1999 budget dollar (Office of Management and Budget, 1998).

From the high point in 1985, with President Ronald Reagan's commitment to rebuild the United States' military strength, the purchasing power of the defense budget had fallen steadily from approximately \$420 billion to around \$255 billion in fiscal year 1999 ("DoD Asks \$4B," 1999). The recent relatively minor increase proposed in the DoD budget for fiscal year 2000 represents the first real military spending increase since the Cold War. Figure 2 shows the defense budget in fiscal year 2000 dollars from 1980 through 2005 in 5-year increments ("DoD Asks \$4B," 1999).

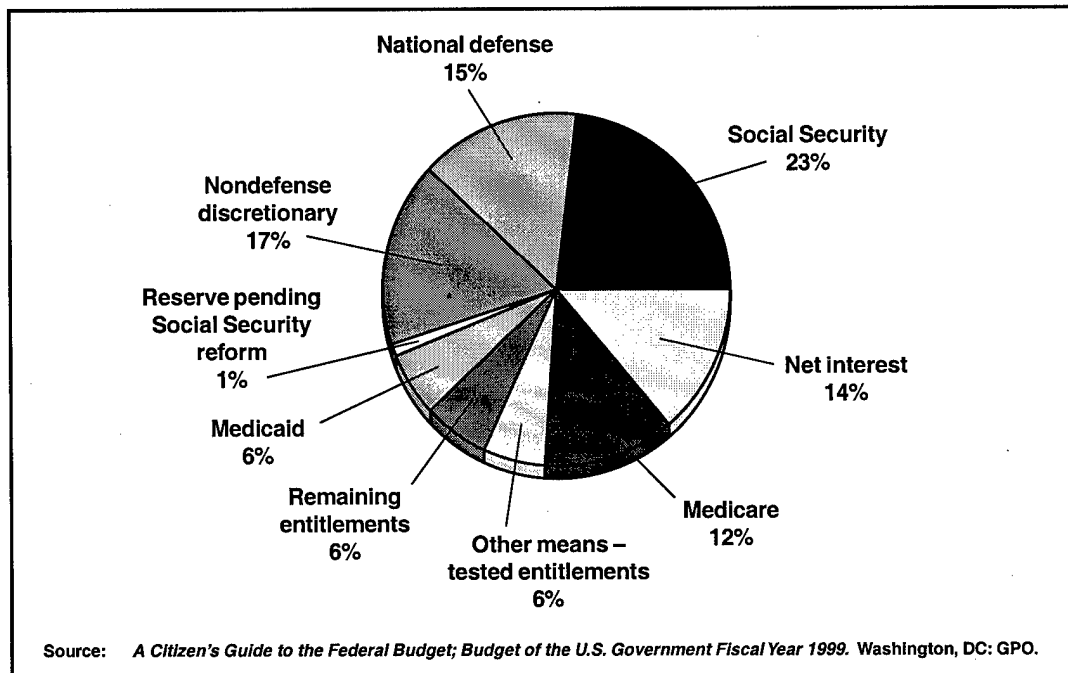


Figure 1. Fiscal Year 1999 Budget Dollar Allocation

ACQUISITION REFORM

The decline of the defense budget (particularly, funds for modernization) and, in turn, the downsizing by the defense

industry resulted in pressure to manage with less and established a clear need for acquisition reform. The desire for new ways of doing business focused on doing things "faster, better, cheaper," and the government

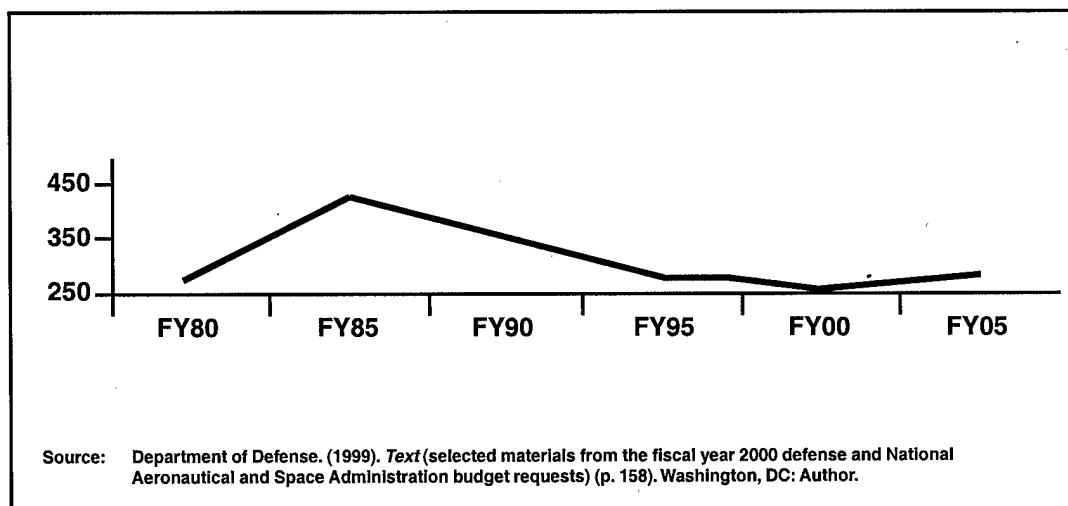


Figure 2
The Defense Budget: From Fiscal Year 1980 to Fiscal Year 2005

procurement rules and regulations began to change.

In 1993 the Section 800 Panel (that is, the DoD Acquisition Law Advisory Panel mandated by Section 800, Public Law 101-510) articulated the basic concept and framework for acquisition reform (DoD, 1993). It also provided in its 1,800-page report recommendations for specific changes that must be made to bring about meaningful reform in defense procurement. The panel's overall recommendation can be summarized as a move from the traditional procurement system, which

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emphasized oversight and unique requirements, to a new approach with emphasis on efficiency and effectiveness. This new approach also included a preference for use of commercial pro-

ducts and services and commercial practices.

Acquisition reform made substantial progress through the first half of the 1990s, culminating in the Federal Acquisition Streamlining Act of 1994 (FASA) and the Clinger-Cohen Act of 1996. At the same time, DoD became a world class buyer of goods and services from a more global marketplace. The bottom line for acquisition reform for both government and industry is to reduce costs, while providing superior weapon systems to the war fighters.

CIVIL-MILITARY INTEGRATION

CMI is both a driving force in acquisition reform and a product of acquisition reform. It is a concept that advocates bringing together the commercial and military sectors of industry, so both commercial and military work can be performed in a common facility using commercial processes and practices. CMI addresses two major concerns—the erosion of the traditional defense industry that resulted from downsizing, and the need to sweep in commercial sector companies that produce technology and products that could be leveraged for defense purposes. With a strong defense industrial base, competition can be increased; and using best-value solutions can provide affordable products and services.

In addition, using commercial practices requires less government oversight and, therefore, reduces the government's infrastructure costs. CMI also allows companies to bring together company-wide assets and resources that otherwise would be separated by type of work. The resulting efficiencies reduce operating costs and overhead. In addition, there is an ability to provide the best solutions for commercial and government customers alike.

BARRIERS TO CMI

The changes brought about by FASA and the Clinger-Cohen Act have removed significant barriers to selling some items produced by commercial companies. However, these changes were narrowly drawn to address buying commercial items, not utilizing commercial capability or capacity for military-unique items.

There still are limitations when building a military item (that is, a purely military item—not a modified commercial item) on a commercial production line or processing it through a commercial facility. An example of this could be found in a large company with both government and commercial segments. The government segment might have a requirement for building government tooling and would like to utilize its commercial segment. The commercial segment has the capability and capacity to produce the tooling. It builds its own tooling in support of its own production needs. However, since the tooling is uniquely military and tooling is not a product line that is offered for sale to the general public, it does not fall within the Federal Acquisition Regulation (FAR) commercial item definition.

This situation also can occur if a company develops a military-unique item and would like to produce it using a commercial process or test facility. Again, this is an available capability, but since it is not a service offered to the general public, it fails to meet the FAR definition of a commercial item. If it does not fit the commercial item definition, the commercial company or segment cannot be relieved from government requirements and terms and conditions, and the government is unable to effectively access the commercial capability.

An avenue is needed to gain access to these commercial opportunities, because commercial capability and capacity can provide best-value solutions. These companies can perform the work, but they encounter barriers in requirements, which demand differing business systems necessary to address unique government requirements. These include:

- pricing and estimating system requirements for cost collection and rate development and application;
- Truth in Negotiations Act (TINA) requirements for submission and certification of cost or pricing data;
- procurement system requirements for approval, compliance, and supplier flowdown, plus domestic source preference requirements;
- government property accountability and material management and accounting system (MMAS) requirements;
- cost accounting standards (CAS) disclosure requirements and requirements for estimating, accumulating, and allocating costs;
- reporting systems to address unique government requirements (socioeconomic, environmental, etc.); and
- management systems that support interaction with government oversight (metrics, audits, record retention, etc.).

To attract commercial interests to defense contracting, there also must be relief from traditional contract clauses. More progress—both legislative and regulatory—is needed to remove these barriers before CMI can be achieved.

REMOVING MORE BARRIERS

Moving forward to complete implementation of CMI will require additional change. Some significant areas include:

Commercial item definition. The commercial item definition needs to be rewritten to clarify the definition of commercial services. Both the criteria for establishing that the "substantial quantities" requirement has been met and the interpretation precluding use of labor hour, time and materials, or similar contracts when purchasing commercial services need to be revisited. In addition, the commercial item definition should be modified to include all products and services produced by a "commercial entity," defined as an enterprise for which a substantial percentage of sales is commercial.

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DoD and defense contractors should have this latitude to provide best-value solutions. The key to participation by commercial companies is being able to

avoid the impact of government requirements. Allowing commercial companies greater access to the commercial acquisition procedures of FAR Part 12 is essential.

Cost accounting standards and Truth in Negotiations Act. Both of these uniquely government requirements receive a great deal of attention as significant barriers for commercial firms. Both need new rules of applicability or broad waiver authority so they can be removed quickly when there is a best-value business case.

Unique business systems. Application of unique and complex business systems to address transactional records, cost collection, accountability, and demonstration

of system compliance can impose significant cost to the operations of a commercial company. Acceptance of commercial or industry standards should be encouraged. For example, today we find ISO 9000 becoming the industry standard for quality. ISO 9000 requires deployment of a process for a quality system, coupled with a certification review process, and a continuing process for sustaining the standard. A somewhat similar approach is used for the software development standard established by the Software Engineering Institute (SEI) capability maturity model. (This activity involves DoD, industry, and academia.) This movement toward use of industry standards is a significant step toward promoting full implementation of CMI.

Prime contractor empowerment. Affordable weapon systems most likely will have significant commercial components, subsystems, and even software. To enable the shift to greater commercial application in military products, the prime contractor should be empowered and tasked to integrate best-value commercial solutions into the end item. This should be accomplished without fear of being second-guessed as to whether the commercial item "rule" has been applied correctly, since it can be subject to different interpretations.

Other barriers. There are many other barriers that are of significant concern to commercial firms. Examples include requirements for certifications, representations, and other similar statements; application of the Civil False Claims Act (with its higher standard of proof for fraud); and requirements for domestic source preferences. Based on an earlier Coopers & Lybrand study, DoD identified

a list of 59 cost drivers. The top 10 cost drivers were the DoD Quality Assurance Program requirement; TINA; cost and schedule control system criteria (C/SCSC); configuration management; contract-specific requirements and statement of work (SOW); Defense Contract Audit Agency/Defense Contract Management Command interface; CAS; MMAS; engineering drawings; and government property administration (Coopers & Lybrand, 1994; Soloway, 1998). The difficulty in formulating a complete list of barriers is that each company is different and, therefore, affected differently by government requirements. However, these requirements must be challenged and eliminated if complete CMI is to be achieved.

WHO BENEFITS FROM CMI?

The defense benefit. DoD is looking for savings from within the defense budget. These savings are to be produced from new ways of doing business that are less expensive and reduce cycle time. The savings would be used to fund DoD modernization of defense weapon systems. DoD already has launched a "revolution in business affairs," for which Jacques Gansler, Under Secretary of Defense for Acquisition and Technology, has established priority actions (1998, June 1). It is in this plan of action that we find the initiative for CMI:

- Aggressively pursue full implementation of acquisition reform.
- Bring about far greater civil and military integration.

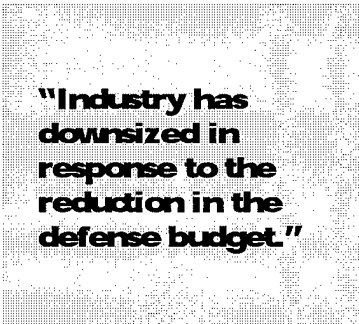
- Shift the major share of resources from infrastructure and support to modernization and combat.
- Reengineer the DoD logistics system and reform its management systems.
- Train and educate the acquisition work force to meet the demands of reengineering.

The changes contemplated by CMI will offer DoD an opportunity to broaden the defense industrial base, gain access to commercial technology and development, and reduce the cost of defense.

Lower costs will come from using commercial practices and avoiding government-unique requirements.

It also will come from reduction in government oversight, which is not needed for commercial contracting since the marketplace provides checks and balances. The result is a more affordable means of providing for the national defense. DoD also views CMI as a way to continue to develop its active partnership with industry. This will open more doors for advanced technology solutions for defense needs.

The industry benefit. Industry has downsized in response to the reduction in the defense budget. The effect has been dramatic. The defense industrial base of nearly 50 major prime contractors shrank to five major contractors between 1980 and 1997, as a result of numerous mergers, acquisitions, and other business



"Industry has downsized in response to the reduction in the defense budget."

consolidations (Credit Suisse First Bank, undated). The traditional defense companies made conscious decisions to either stay in the defense market or move to the commercial market. Those leaving sold the defense portions of their businesses. Those remaining are positioning themselves through acquisitions, mergers, and other business strategies to increase market share and compete for the defense dollar.

The U.S. aerospace industry has annual sales of \$140.5 billion spread among three segments of the industry—military defense, space and communications, and civil and commercial aviation (“Aero-

space Industry,” 1998). Industry is looking for growth and return to provide shareholder value. But those in the defense business will have trouble finding growth

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in the U.S. military defense market. Growth in this area will be achieved by capturing market share from other competitors. Foreign military sales may provide some additional opportunities, but this area has its limitations, since the reduction in defense spending is not limited to the United States. In addition, there are strong foreign competitors looking for market opportunities. The foreign marketplace also has its own pitfalls, such as the potential for an unbalanced playing field due to foreign policy considerations and national interests.

The civil and commercial aviation market shows growth, but continues to run in cycles with erratic patterns driven by world

economic conditions. At the moment, we are seeing a record number of commercial airplane deliveries. Even though other elements of the world economy are struggling, this segment of the market currently is enjoying growth. It is apparent, however, that the most dramatic growth is occurring in the space and communications market. Today, the space and communications market is approaching one-third of the total aerospace market and is nearly equal to the other market segments (civil and commercial aviation, and military). The growth in this market cannot be ignored. Aerospace companies are entering the market to provide satellites, launch vehicles, and ground operations, among a myriad of other related services and products. With the tremendous growth in investment in the U.S. commercial space market (estimated at a half trillion dollars to be spent in space between 1996 and 2000) and an estimated 1,500–1,800 satellite launches to be made in the next 10 years, commercial space becomes an obvious target for business opportunities (Aerospace Industries Association, 1999).

These growth areas—civil and commercial aviation, and space and communications—are predominantly commercial business opportunities. For defense contractors to grow, they will have to enter and compete in these sectors. To compete, they must be able to shed the burdensome government-unique business systems and practices carried over from their defense heritage. If they cannot or do not, their success may be jeopardized. Moving forward with CMI will allow contractors to migrate to commercial practices and business systems. This, in turn, will create synergy with commercial growth opportunities and leverage efficiencies and cost

reduction for both government and commercial customers.

Therefore, CMI is a critical element in preparing industry for the mixed defense and commercial marketplace evolving around us today. CMI not only is an opportunity to attract new commercial firms to the defense industrial base, but also is necessary to assure that those already there will stay and, at the same time, have good opportunities for growth.

The national benefit. The aerospace industry produces high-tech jobs. It provides technology and products that create collateral technological growth and that have application across a wide variety of industries. These are the types of jobs and the kind of industry that created the standard of living that most Americans have come to appreciate and expect. The aerospace industry, also, is a key element in maintaining the United States' balance of trade. In fact, aerospace exports are the most significant positive factor in our country's balance of trade. In 1997, aerospace exports, imports, and trade surplus were at a record high. The U.S. aerospace industry reported a trade surplus of \$32 billion ("Aerospace Trade," 1998).

The health and welfare of a nation reside with its economic strength. To quote Lester Thurow (1992):

History is clear. While military power can sometimes outlast economic power for centuries, eventually military power depends upon having a successful economic base.

With the leadership role that the United States will carry into the 21st century, it is essential to the national interest that we

continue to lead the world in aerospace technology, production capability, and services. It is from this industrial base that we will provide for defense needs and sustain a healthy economy for the future.

THE CASE FOR URGENCY— THE EMERGING THREATS

The defense threats predicted for the 21st century are, in fact, emerging today. Under Secretary Gansler has addressed these emerging threats when speaking to government and industry (1998, June 22):

Early 21st century warfare will be dramatically different. ... [We] face a world where individual terrorists, transnational actors, and rogue nations can unleash firepower in many ways as terrifying as that of a major global power—and perhaps even more likely. These are not disorganized bands of political zealots armed with pistols and hand grenades. Today's threat comes from well-organized forces, armed with sophisticated, deadly weapons (often purchased on the world arms market), with access to advanced information and technology (often available commercially), the skills to use them (or the ability to purchase the skills), and few moral inhibitions about their use.

Those potential threats are with us now—the threat of weapons of mass destruction in Iraq, emerging nuclear capability in Pakistan and India, advanced

missile tests by North Korea, and the recent U.S. embassy bombing by terrorists in Africa. There is an immediate need for development and deployment of deterrence for 21st century threats. Therefore, the ability to produce funding out of savings from the revolution in business affairs is extremely important. We all need to contribute to the savings today.

There also is an urgency regarding America's industrial competitiveness. A competitive disadvantage is created by continuing to separate commercial and defense business. Companies need to be in a position to apply their entire resources to providing "best-value" solutions for their customers—regardless of whether the solutions are for commercial or government application. There is no guarantee that U.S. industry will maintain a leadership role in the aerospace market. Recent history demonstrates that leadership in the competitive global market can change hands quickly. Let us remember what we have seen happen to our world market share in some other

major industries, such as steel, automobiles, consumer electronics, machine tools, and semiconductors.

No day should pass without these factors uppermost in our minds. We should feel the pressure.

CONCLUSION

Government and industry have been reshaped and redefined in the 1990s. In consonance with these changes, we need to continue our progress with CMI, acquisition reform, and other elements of the DoD revolution in business affairs.

Our success in the future depends on our decisions today. At stake, as industry positions itself for global competitiveness and the country positions itself for continuing global leadership, are a superior national defense and a strong economy. The nation is counting on the leaders in government and industry. We should make decisions and change the rules when it makes sense. CMI makes sense.



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