TEST AND EVALUATION MANAGEMENT REFORM: *ISSUES AND OPTIONS*

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Can a change in the management structure of the Department of Defense's test and evaluation infrastructure make it more cost effective and efficient while retaining the responsiveness and the weapons quality of the present system?

The Department of Defense (DoD) acquisition process and its test and evaluation (T&E) subprocess produce the world's finest weapon systems, and it retains a reputation for responsiveness to military needs and acquisition of quality weapon systems and other items. Yet the constant pursuit of greater cost-effectiveness and efficiency leads to questions and analyses of whether a different management structure—such as a single DoD T&E organization—would better accomplish these needs and goals. To properly consider this question, here we will focus on the infrastructure and management that supports the T&E process rather than on the T&E process itself, which consists of the planning, provisioning, and conducting of tests together with the analysis and reporting of data resulting from those tests.

As a starting point to the discussion, it is worthwhile to look at the makeup of the T&E infrastructure. Changes and improvements cannot be appreciated or understood without knowing the basis from which the changes are originating.

The DoD T&E infrastructure consists of the Major Range and Test Facility Base (MRTFB), whose policy guidance document is DoD Instruction (DoDI) 3200.11, the latest version dated January 26, 1998.[1] "The MRTFB is part of the National Test Facilities Base and is a national asset that exists primarily to provide T&E information for DoD decision makers and to support T&E needs of DoD research programs and weapon system development programs" (DoD, 1998, para. 3.1.2 & 3.1.3 and enclosure 2). Within the MRTFB, there are 21 test activities whose management is performed by four

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components and nine commands with oversight by the Office of the Secretary of Defense (OSD) (Sanders, 1999). Membership of the MRTFB is listed in Appendix 1.

The Defense Test and Training Steering Group (DTTSG), chartered by the Under Secretary of Defense for Acquisition and Technology (USD [A&T]), acts as a permanent organization to coordinate planning and actions with respect to the MRTFB. Membership consists of representatives from the T&E and training communities of OSD and the military components. "These T&E ranges, where several thousand test projects are performed each year for DoD, other federal agencies, U.S. allies, and commercial users, are worth $25 billion and account for more than 50 percent of the total DoD land area in the continental United States" (Cohen, 1998).

The T&E infrastructure accounts for about 1.6 percent of the total DoD infrastructure budget, about $1.85 billion in fiscal year 1997 dollars. The total acquisition infrastructure is approximately 9.1 percent of the DoD infrastructure (Institute for Defense Analysis [IDA], 1998). Funds flow to the T&E facilities through several accounts and Service components, the primary ones being research, development, test, and evaluation (RDT&E) accounts, operations and maintenance (O&M) accounts, military personnel, procurement, and military construction accounts for the Services. These funds are used to keep the facilities ready for customer use and for upgrades to capabilities.

The users of the facilities pay for the direct support provided to them, which amounted to $1.5 billion in fiscal year 1997 (IDA, 1998). The DoD infrastructure included 1,437,768 personnel in 1996. Of these, 18,845 people (1.3 percent) were assigned to T&E functions within the Services (IDA, 1998). Appendix 2 provides different perspectives on T&E funding.

The questions that are posed by the critics of the process focus on how efficient it is and whether there are ways in which the costs can be reduced while still maintaining quality. The critics believe the process is poorly managed, inefficient, too bureaucratic, and in need of reform (Sanders, 1999). Their criticisms can generally be summarized in the following six statements:

- The bureaucracy is too big and too complex.
- The bureaucracy suffers from excessive duplication.
- It does not provide for clear lines of command and accountability.
- It sustains a counterproductive incentive structure and limits the ability of acquisition executives to effect cultural change.
- It exacerbates the natural tendencies of the Services to favor parochial solutions.
- It has not responded to the post-Cold War decline in acquisition spending and manpower levels (IDA, 1995).

We must not forget that the U.S. defense acquisition process has produced the finest combat systems in the world in

spite of its inefficiencies. As Jacques Gansler stated in his book *Defense Conversion,* "America designs and builds the best weapons in the world. These weapons, however, cost too much (especially in the small quantities likely to be bought in the future), take too long to develop and produce, and are often unreliable and prohibitively expensive to operate and support" (Gansler, 1995).

There are several reasons why these issues have been and are currently under debate. The most obvious is the Congressional language contained in the National Defense Authorization Act for Fiscal Year 1998, (Section 912. Defense Acquisition Workforce), which states:

> (a) Reduction of Defense Acquisition Workforce. (1) The Secretary of Defense shall accomplish reductions in defense acquisition personnel positions during fiscal year 1998 so that the total number of such personnel as of October 1, 1998, is less than the total number of such personnel as of October 1, 1997, by at least the applicable number determined under paragraph (2).
>
> (2)(A) The applicable number for purposes of paragraph (1) is 25,000. However, the Secretary of Defense may specify a lower number, which may not be less than 10,000, as the applicable number for purposes of paragraph (1) if the Secretary determines, and certifies to Congress not later than June 1, 1998, that an applicable number greater than the number specified by the Secretary would be inconsistent with the cost-effective management of the defense acquisition system to obtain best value equipment and would adversely affect military readiness.

The Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Sec. 907. Management Reform for Research, Development, Test, And Evaluation Activities) states:

> (a) Analysis and Plan for Reform of Management of RDT&E Activities. The Secretary of Defense, acting through the Under Secretary of Defense for Acquisition and Technology, shall analyze the structures and processes of the Department of Defense for management of its laboratories and test and evaluation centers. Taking into consideration the results of that analysis, the Secretary shall develop a plan for improving the management of those laboratories and centers. The plan shall include such reorganizations and reforms as the Secretary considers appropriate.

The complete sections (912 and 907) of these acts can be found in Appendices 3 and 4.

Since 1987, more than 150 studies have addressed the need for DoD to achieve operational efficiencies in its RDT&E infrastructure. Figure 1 shows the more significant studies that have taken place from 1988 through 1998 (IDA, 1998). Recommendations from these studies focused mainly on management inefficiencies and

less on infrastructure reductions. For example, the 1995 "Directions for Defense: Report of the Commission on Roles and Missions of the Armed Forces" identified many opportunities for DoD to integrate operational activities with duplicative missions in areas such as command, control, communications, computers, and intelligence rather than RDT&E infrastructure reduction (Government Accounting Office [GAO], 1998).

One of the more recent studies is the 1995 Base Realignment and Closure (BRAC) study. "The BRAC cross-Service group for test and evaluation analyzed the capacity of 23 activities that supported test and evaluation of air vehicles, electronic combat, and armament/weapons and identified about 495,000 test hours of excess capacity. However, the group did not set capacity reduction goals" (GAO, 1995). This 1995 BRAC Cross-Service Analysis is widely quoted for its statement that there is a 52 percent excess T&E capacity for air vehicle, electronic combat, and armament/weapons testing infrastructure (IDA, 1998).

The 1998 Department of Defense Report to Congress estimated a 23 percent overall excess RDT&E base capacity. This excess capacity was broken down by Service as: Army T&E and lab facilities, 39–62 percent excess capacity; Navy/Marine T&E and lab facilities, 18 percent excess capacity; and Air Force product center, labs and T&E excess capacity, 24–38 percent excess capacity (IDA, 1998).

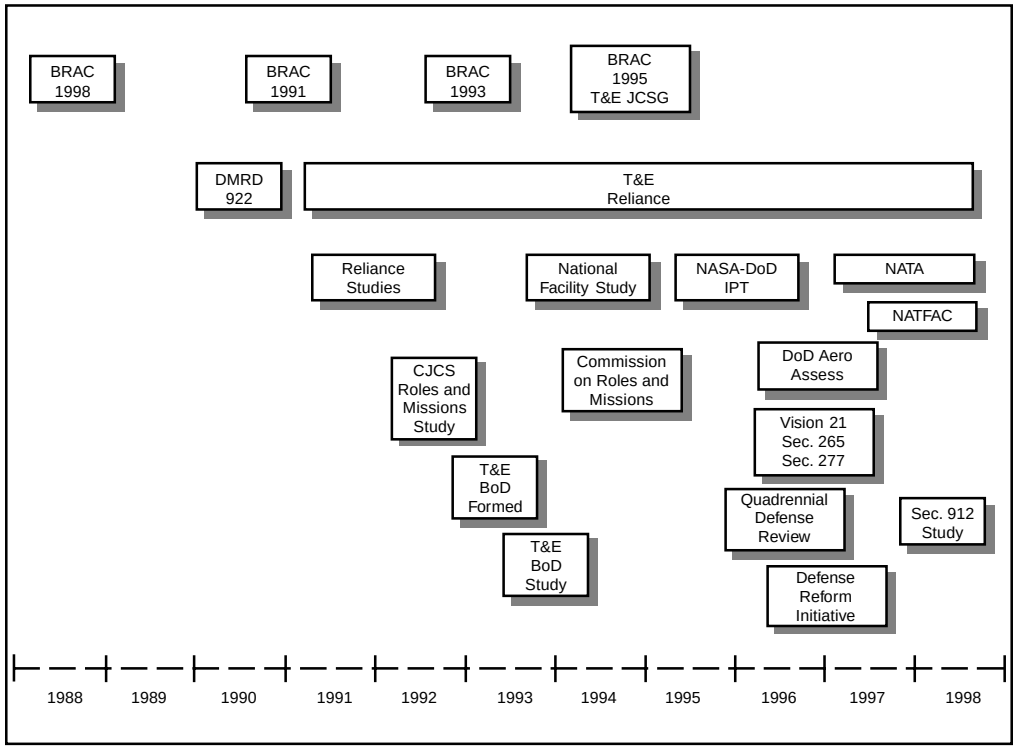

Figure 1. Studies Involving T&E

In addition to the need for reducing the amount of expenditures so that more is available for operational and modernization needs, there are also factors internal to the T&E community that drive a need for more efficient use of the available funds. The T&E infrastructure is aging, requiring costly repairs and upkeep; technology growth in the weapon systems being tested requires a commensurate growth in the measurement and evaluation capabilities of the T&E infrastructure, and a need for more flexibility and responsiveness to changing requirements all compel redesign of the infrastructure.

The current management structure evolved over time during the Cold War era and is complex and cumbersome with many oversight, coordinating, and approval links. While some recent changes in the OSD oversight structure have taken place,[1] the overall structure remains very complex, overlapping, and inflexible. It cannot respond either to short- or long-term market changes. Finally, since 1990, the funding has declined significantly, making it difficult to continue to support the MRTFB as it exists today. The user (customer) funded workload in work-years is down 25 percent from fiscal year 1990 to 1999 and institutional funding is down 30 percent from 1990 to 1999 (IDA, 1998).

DISCUSSION

The options for restructuring the T&E infrastructure management include simple changes that alter the current structure very little, to radical changes that would drastically change how business is done within the T&E community. Some of these options follow.

The first option would be to leave the current system in place as it is. This is a system of decentralized management. Each Service is responsible for its own facilities with an MRTFB framework of oversight. It is structured to provide high mission focus dedicated to the Services. A complex organizational structure, it consists of a number of committees, boards, councils, and steering groups (T&E Reliance Structure, Range Commander Council [RCC], DTTSG, Board of Directors/ Board of Operating Directors/ Joint Program Office [BoD/ BoOD/JPO], Test and Evaluation Resources Investment Board, Test and Evaluation Committee, and Service T&E Principals).

> "The T&E infrastructure is aging, requiring costly repairs and upkeep...."

The MRTFB funding policy for direct cost to the users is somewhat self-regulating but lacks flexibility to accommodate special circumstances. While the current structure uses DoD-wide personnel, contracting, financial, management, and administrative practices, it still remains difficult to compare costs between facilities and ranges and especially between Services. The current system favors Service priorities over defense-wide priorities, making it difficult at times to get cross-Service support. Recapitalization of aging facilities is difficult to achieve and it is hard to make long-term commitments to potential users or to make long-term commitments to providers of services under the existing management structure (IDA, 1998).

A second option is that of combining each Service's T&E organizations into a single Service organization that would report to a Service T&E component commander. Included within the Service's T&E component organization would be not only the developmental testing organizations but also the operational test organizations and the Service's battle labs as well.

The T&E component organization could be placed under the Atlantic Command (ACOM). ACOM would have oversight over the Services' T&E activities but the policy and direct control would remain within the purview of the component commander. Funding for the operations, modernization, and support would derive from three sources. The users of the T&E facilities would continue to pay as they do now for the direct support provided to them. The Service's acquisition community, through a T&E funding program element, would provide the institutional funding.

"[A second option] allows the Services to retain control over the infrastructure and the funding for its operations and modernization, thus controlling its own destiny."

For example, the Air Force institutional funding line would be through the Assistant Secretary of the Air Force for Acquisition (AF/AQ). The Service operational side would provide the base operating allocation funds. This proposed structure would eliminate the need for policy level staff functions within the Service staffs (Engel, 1999). This option allows the Services to retain control over the infrastructure and the funding for its operations and modernization, thus controlling its own destiny. Oversight, however, shifts to the operational users rather than remaining in OSD as in the current structure.

A third option is that of a continental United States (CONUS) Range Command structure. The command would place the T&E activities within the MRTFB under the purview of a single commander who would report to the Board of Operating Directors, which is comprised of the Services' vice-chiefs. The O&M budgets would remain within the Service accounts. The focus would be on operational cost-efficiency. The ranges would be considered as parts of an integrated whole, rather than as separate facilities. Operations, under this proposed concept, would be contracted out under a single A-76 O&M contract.

The proposed plan would allow the ranges to be placed into and out of caretaker status with a 30-day call-up notification as the workload surges and shifts. The workforce would be shifted as required to meet the workload demands of the various ranges. This approach should result in significant cost-savings from work force reductions. There are a number of potential political issues that would have to be resolved for this concept to work, however. Since the Services retain possession and control of the ranges, it is believed that there are no legal barriers to implementing this option and it should not require congressional approval (Hollis, 1999).

The fourth option consists of realigning the funding to a centralized funding line for justification, appropriation, and distribution. User funding would not be

affected and would remain as it is today. Establishment of requirements and needed capacity for the next 10- to 15-year period would be done during each Quadrennial Defense Review through a joint Service, OSD, Defense Advanced Research Projects Agency, and Ballistic Missile Defense Organization working group. The requirements and capacity forecast would be provided to OSD, the Services, and BoD for developing the Future Years Defense Program. The DTTSG would have final approval on priorities and locations for the spending plans.

The execution would be through the Service channels with execution monitoring being done by the BoOD/JPO, who would provide semi-annual reports to DTTSG. The DTTSG/BoOD would be responsible for developing the program objectives memorandum and budget estimate submission inputs as well as responding to congressional issues. Annually, after the appropriation bill passed, OSD/DTTSG would approve distribution of funds to Services for execution. The Services would be responsible for distributing funds to the MRTFBs for O&M and investments. Charge policies for range use would be as specified in DoD regulations. The implementation of this option would require congressional approval (IDA, 1999).

The fifth option for consideration is establishment of a Defense T&E Command (DTEC) under the Defense Logistics Agency (DLA). The Services would retain the bases and support infrastructure while the T&E activities would be performed as tenant activities. Funding, both user and institutional O&M, would remain as it is now. A central account would provide funds for all investments and personnel support. The local Service commander would continue to operate the T&E activities. Military personnel would be assigned as they are now under the current system.

The DTTSG and BoOD would provide oversight to ensure that the Service and OSD priorities were recognized. DTEC would provide the day-to-day management and run the investment programs. DTEC would also be the test location recommendation source. There are several variants of this option which are: to include all MRTFBs, only the RDT&E MRTFBs, or facilities could be grouped by category of major focus testing such as aircraft, weapons, etc. This option would require congressional approval for implementation (IDA, 1999).

"A central account would provide funds for all investments and personnel support."

A sixth option is to consolidate all T&E infrastructure under the management control of a DoD T&E agency (DTEA). Funding and management would be by the agency in a single account for O&M and a single investments account. Day-to-day operational scheduling could be done either locally or by a single centrally located scheduling office. The latter would allow for more effective scheduling of joint multifacility programs.

The need for congressional approval of this option is a source of debate. Supporters contend that the Secretary of Defense has the authority to make this change in *U.S. Code* Title 10, which states, "Whenever the Secretary of Defense determines such action would be more effective, or

efficient, the Secretary may provide for the performance of a supply or Service activity that is common to more than one military department by a single agency of the Department of Defense."

A seventh option is to establish a Defense Acquisition Agency (DAA) that would combine all of the acquisition functions within each of the Services under a single DoD agency. T&E would become consolidated under a department within this agency. The functions and operational approach would be similar to the approach under the option above (IDA, 1999). "The concept of a centralized, civilian-operated weapons systems acquisition agency was considered during both the First and Second World Wars. However, all proposals for such an agency were rejected" (GAO, 1986).

The most serious recent discussion of this policy change was in 1986 when the GAO was required to look at a centralized, purely civilian acquisition organization by Congress in the National Defense Authorization Act of 1986. The report listed a number of advantages and disadvantages and stated, "The major acquisition problems most often described were: (1) inadequate requirements identification, (2) program instability, and (3) a lack of uniform policy implementation. The predominant views expressed were against the Agency. Many believed that any advantages offered would be more than offset by the disadvantages" (GAO, 1986).

A RAND study assessed the push for centralization this way (Donohue, Lorell, Smith, and Walker, 1993):

> During the last months of the Bush administration, high-level decision makers discussed the possibility of consolidating all military R&D and acquisition into a single civilian DoD agency, with additional DoD agencies for Science and Technology, and Test and Evaluation. Under such a plan, the military Services would still generate weapon system requirements, but from then on all R&D, development, and testing would be the responsibility of the centralized civilian agencies. The goal of centralization would be to reduce overhead, improve management, eliminate duplication, increase economies of scale, and tighten control to minimize cost growth and schedule slippage.

The GAO report, however, was not optimistic about the results (1986):

> For years, advocates of greater centralization of the U.S. acquisition process have pointed to the highly centralized civilian acquisition bureaucracies of many of our major allies in Europe and elsewhere as possible models. Probably the foreign model most often mentioned is the French system, which is dominated by the centralized acquisition agency called the Delegation Generale pour l'Armament, or DGA. Are these foreign centralized agencies indeed more efficient? Unfortunately, there is little reliable data to indicate clearly that foreign organizations manage their limited military R&D resources more efficiently.

The eighth and final option is a uniquely different approach. This option proposes to establish a government corporation that would be a semigovernmental entity chartered by the government to manage and provide T&E services. This approach is used extensively by state, local, and federal governments. The *U.S. Code* (Title 31, Subtitle VI, Chap. 91, § 9102) governs the application of government corporations at the federal level.

Some of the more familiar examples of using this approach in state and local governments are turnpike authorities, water and sewer commissions, and airport authorities. Examples of use at the federal level are the Tennessee Valley Authority, Federal Deposit Insurance Corporation, AMTRAK, and the Saint Lawrence Seaway Development Corporation.

Its past application has been for noncore functions, which government has a legitimate interest in seeing are performed in support of the general public. The use of this approach should allow the government to implement the best business practices of the private sector in personnel management, contracting procedures, long-term commitments to service providers and service recipients, and allow long-term investments using best commercial practices while preserving government interests. The amount of control exercised by the government can be set at any level desired by the government. Implementation of this option would require congressional approval and would likely face tough challenges in the political arena. The option could be exercised at several different levels, including strictly T&E facilities or, at a broader level, including other RDT&E facilities.

Established to operate like a commercial enterprise, it would operate using best commercial practices and be managed by a CEO from the private sector, who is compensated as a private-sector CEO. Oversight and control would be afforded to the government through a Government Board of Directors (GBOD) comprised of government and private sector members. Such a government corporation would have the authority to float bonds for investments, just as a privately owned corporation would (GAO, 1986). This option provides the flexibility needed to adjust to market and cultural changes.

CONCLUSION

The options discussed above represent only a sampling of those that are possible. They do, however, represent the thinking of some of the most senior and most experienced minds in the test and evaluation business and represent a cross-section of the thinking within the Services, OSD senior staff, and the defense industry. The options represent widely diverse positions that range from minor changes within the management structure to radically altering the structure.

"A central account would provide funds for all investments and personnel support."

To assess the options, a reference framework is needed. The Services prefer to remain in control of their own destiny, which means they desire to retain as much control as possible. From an overall DoD perspective, it is desirable to have the least

duplication, most cost-efficient and effective possible—a solution optimized for the joint overall good. Since the current structure represents the Service control option and, if the critics are correct, has not led to an effective and efficient structure, an alternative form of management structure would seem to be justified.

Table 1 summarizes the framework used to compare the options. Since option 1 is the current structure and has been discussed previously, only the other seven options are shown in the table. A discussion of charge policies is omitted from the table since it is the same for all except option 8. The last row of the table (Row J) captures the concerns of the critics about the current structure and the capability of each of the options for addressing those concerns. The note in Table 1 lists the criticism discussed above and ranks the criticisms in importance based on the current structure's weaknesses. That ranking is as follows:

"Option 2, Service T&E Commands, addresses several of the issues but not the three issues of most concern: market flexibility, adaptability to cultural change, and the responsibility for making the hard decisions."

- **Market response (short-term flexibility):** How fast can the T&E management structure respond to changes in the marketplace?

- **Cultural changes (long-term flexibility):** How rapidly can the T&E management structure respond to changes in the acquisition culture such as the end of the Cold War?

- **Clarity of the command chain/responsibility:** How clear is the chain of command and identification of the responsible individuals who should be making the difficult decisions?

- **Parochial (Service-focused) solutions:** Strongly correlated to the command chain/responsibility aspect. Are the decisions made from a parochial view or are they made from a joint/DoD perspective?

- **Duplication:** How well can the management structure assess and respond to duplication of facilities?

- **Bureaucracy:** How "sluggish" and overpopulated is the management structure? This was given the least priority in the ranking system because it is tied to several of the issues above. If the management structure is open to cultural changes and has a clear command chain that is responsible for acting, then the bureaucracy can be managed quite well.

Option 2, Service T&E Commands, addresses several of the issues but not the three issues of most concern: market flexibility, adaptability to cultural change, and the responsibility for making the hard decisions. This option does have an advantage over the current structure in eliminating the need for policy level staff functions within each Service staff, thus reducing somewhat the manpower in the oversight role, but this is not a significant enough advantage to warrant change.

Characteristics	Option 2, Service T&E Commands	Option 3, CONUS Range Command	Option 4, Centralized Funding	Option 5, Defense T&E Command (DTEC)	Option 6, DoD T&E Agency (DTEA)	Option 7, Defense Acq. Agency with T&E Department	Option 8, Government Corporation
A. Management	———	———	———	———	———	———	———
1. Strategic level	Service T&E commands	CONUS command	Service	DTEC	DTEA	DAA	Government Board of Directors (GBOD)
2. Day-to-day operations	Local commander	Local commander	Local commander	Local commander	Local supervisor	Local supervisor	Local supervisor
3. Congressional interface	Service	CONUS command	DTTSG/BoOD	DTEC, Services	DTEA	DAA	CEO
4. PPBS responsibility	Service	CONUS command	DTTSG/BoOD	DTEC, Services	DTEA	DAA	N/A
5. Management focus (mission, efficiency, etc.)	Mission	Mission	1. Mission 2. Investment efficiency	Efficiency	Efficiency	Efficiency	Efficiency and effectiveness
B. Funds management	———	———	———	———	———	———	———
1. O&M	Service	CONUS Command	DTTSG/BoOD	Services	DTEA	TED	Corporation
2. Investments	Service	CONUS Command	DTTSG/BoOD	DTEC	DTEA	DAA	Corporation with GBOD approval
C. User/customer funds	User/program offices	User/program offices	User/program offices	User/program offices	User/program offices	User/program offices	User/program offices
D. Oversight	ACOM	BoD	OSD	DTTSG/BoOD	OSD	OSD	GBOD
E. Facility/range control	Services	Services	Services	Services	Services, host bases; DTEA, T&E facilities	Services, host bases; TED, T&E facilities	Services, host bases; Corp., T&E facilities
F. Users/customers (Note: All options place the DoD as top priority for customer support)							
1. Commercial	Yes, on non-interference basis	Yes, on non-interference basis	Yes, on non-interference basis	Yes, on non-interference basis	Yes, on non-interference basis	Yes, on non-interference basis	At commercial rates
2. Other	As allowed by law	As allowed by law	As allowed by law	As allowed by law	As allowed by law	TBD	At commercial rates
G. Personnel	———	———	———	———	———	———	———
1. Civilian Responsibility	Civil Service	Civil Service	Civil Service	Civil Service	Civil Service	Civil Service	Industry practices
2. Military	Service assigns in career fields	By career field from services	By career field from services	By career field from services	Technical advisors only	Technical advisors only	N/A
H. Implementing Authority	U.S.C. Title 10	U.S.C. Title 10	Congressional approval	Congressional approval	Congressional approval	Congressional approval	Congressional approval
I. Implementation Impediments	Political sensitivities	Political acceptance	Political acceptance	Political acceptance, Service resistance, multiple budgets	Political sensitivities, Services' resistance	Political sensitivities, Services' resistance	Political sensitivities, Services' resistance
J. Issues addressed by option[a]:	Cost efficiencies, issues 4,5, & 6	Issues 3, 4, & 5	Issues addressed by option; 4, 5, & 6	Issues addressed: 3, 4, 5, and 6	Issues addressed: 3, 4, 5, and 6	Issues addressed: 3, 4, 5, and 6	Issues addressed: 1, 2, 3, 4, 5, and 6

[a]: 1. Market response (short-term flexibility); 2. Cultural changes (long-term flexibility); 3. Command chain/ responsibility; 4. Parochial solutions; 5. Duplication; and 6. Bureaucracy.

Table 1. Test and Evaluation Restructuring Options

Option 3, CONUS Range Command, closely resembles option 2, but is one step closer to centralized control and to reducing dramatically the infrastructure manning through an A-76 action. Still, it does not address either of the top two issues of short-term flexibility (market response) or long-term flexibility (cultural change).

Option 4, Centralized Funding, is a financially focused approach that is centered on controlling the flow of investment funds as a way of controlling the future development of facilities and ranges and thus reducing duplication. It is limited in the changes it would be able to accomplish and would be slow in developing a solution. It would, however, probably gain eventual acceptance within the Services. It faces strong political opposition and requires Congressional Approval, a large battle to be fought for such a small gain since it does not address the three issues of most concern—market flexibility, adaptability to cultural change, and a clearly identified decision maker responsible for making the tough calls.

"If DoD is serious about revolutionizing the approach taken to the business of weapons procurement and testing, then it requires serious changes to the current management structure."

Option 5, Defense T&E Command (DTEC), is a variation of option 3. It suffers from a split in the ownership of the budget accounts between the Services and the command, a difficult situation to overcome. Although these accounts are separate, for purposes of justification and support, they are more easily supported if they come from the same organization (Service, command, etc.).

Option 6, DoD T&E Agency (DTEA), and option 7, Defense Acquisition Agency with T&E Department, are very similar. Both address a number of the efficiency and cost-effectiveness issues but are weak in providing the flexibility and market response agility that is desirable for rapid market responses and for overall long-term flexibility.

Option 8, the government corporation, is the only option that clearly addresses the two major issues of short-term and long-term flexibility. Many of the best practices that are desired from the acquisition community and its T&E subcomponent require changes to the way business is done—the "revolution in business affairs."

If DoD is serious about revolutionizing the approach taken to the business of weapons procurement and testing, then it requires serious changes to the current management structure. Only option 8 proposes those changes that will make the management structure responsive to the market because it is the only option that allows implementation of market response mechanisms.

This option also provides other desirable management structure characteristics such as a broad strategic span of control, minimized stovepipes, and delegation of authority to the lowest level possible that add to its appeal as a new way of doing business. Such a structure would minimize bureaucracy and flatten the organizational structure. Flexibility in personnel, contracting, and financial management practices would also be achieved. The nongovernment corporation would also allow

for more innovative financial business practices that would spur investments as well as provide for easier access to commercial services and more easily accommodate purchases from commercial or academic sources.

It, however, calls for changes that will be difficult to implement because of the drastic changes in the culture and control of resources necessary to make the change. The Services will resist, congressional approval will be difficult to achieve, and the current civilian organizational components will resist implementation. But, if Congress is truly interested in the DoD operating like a business, then it must support the organizational changes necessary to place those components (like the T&E infrastructure) that are most like the commercial world in a business-styled structure. In spite of these obstacles, option 8's potential benefits are worthy goals that should be pursued.

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ENDNOTES

1. On June 7, 1999, the Secretary of Defense approved the transfer of key test and evaluation responsibilities from the Office of the Undersecretary of Defense for Acquisition and Technology (OUSD[A&T]) to the Director, Operational Test and Evaluation (DOT&E). The SECDEF also directed that DODI 3200.11 be revised appropriately to reflect the realignment of responsibilities for the MRTFB and to reflect that DOT&E will establish policy for and composition of the MRTFB.