Pentagon Decision-Making Comes Under Fire

Critics inside and outside the Pentagon say that senior officials have made some ill-advised weapons purchases

Every 2 weeks, on the average, five men meet in a conference room on the first floor of the Pentagon and decide to spend anywhere from hundreds of millions to many billions of dollars on a major new weapon system. Because no major arms contract is signed and no huge production line is established without its approval, this group, known as the Defense Systems Acquisition Review Council, or DSARC, has long been one of the most powerful and important in Washington.

Recently, it has also become one of the most controversial. Amid mounting concern about the shoddy workmanship, skyrocketing costs, and unreliable operation that characterize some modern weapons systems, a number of critics believe that the council is doing an extremely poor job. They say its members are too easily misled by subordinates about the virtues of a weapons system, that they are too sanguine about the difficulties of repairing defective weapons, and that they are obsessed with pushing weapons into the field at the expense of efficiency and reliability.

As a result, the critics say, council members* routinely approve weapons that do not work, and which eventually cost billions of dollars more than anticipated. Some believe that no serious reform of the weapons procurement process is possible until the council itself is modified or recast, while others believe that its members need only exercise more discipline and pay closer attention to the data they receive.

Much of the criticism comes from Capitol Hill. But one of the most effective and persistent critics of the council's performance is Joseph Sherrick, the Pentagon's own inspector general. Since September 1982, shortly after he was appointed, Sherrick and his staff have conducted audits of the council's decisions on 16 different weapons programs. He found that its members routinely ignore Defense Department procurement regulations, rarely scrutinize a weapon during the early stages of its development, frequently fail to demand detailed information about a weapon's defects, and rarely demand an explanation for delays.

A good illustration of these problems was provided last summer, when the Army's new $4.5-billion antiaircraft cannon was the subject of inquiries by Sherrick, the Senate Committee on Governmental Affairs, and the General Accounting Office. The cannon, commonly known as the DIVAD, or Division Air Defense gun, rose to fame in the wake of reports that its radar had been distracted by a latrine exhaust fan during field tests that proved it incapable of swiftly striking a maneuvering helicopter, its primary target. A complete and accurate summary of the test results was withheld from the DSARC until 7 months after production had been approved.

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Sherrick's investigation disclosed that the DSARC members knew these data were missing, but decided to go ahead anyway. Noting this, his office concluded that "the DSARC process, as presently formulated, does not provide sufficient insight to the decision-makers. The DIVAD program is an example of the failures of the process." Earlier, James Finsterle, a senior official in the Pentagon's office of program analysis and evaluation, had also concluded that "the remarkable variance between pre- and postdecision DIVAD data indicates quite clearly that the DSARC process needs improvement."

Richard DeLauer, who chaired the DSARC until his recent resignation as under secretary of defense for research and engineering, sharply disagrees with these assessments. In a letter to Sherrick last August, he said that "you have provided no evidence or strong rationale for changing DSARC procedures. In fact, from a process standpoint, it is functioning almost exactly as you recommend. In the case of DIVAD, the required documents were provided well in advance of the meeting and the issues were clearly illustrated and discussed . . . [even though] the test data available at that time were preliminary in nature."

But additional audits by Sherrick's office recently made available to *Science* indicate that the DIVAD is only one of many weapons to receive inadequate scrutiny by DSARC members. In a 1983 review of five major programs, for example, the office found that accurate data on costs, tests, and the Soviet threat were rarely provided to the council when they should have been. "The only document consistently available" was the one in which a new program is proposed, the inspector general's report concluded.

In two instances, the council went ahead and approved additional weapons systems development "with incomplete and inadequate documentation," while in three others, it responded to audits by delaying any final decision, the report says. No one asked why the data were unavailable on time, and no deadlines were set for new reviews. "Not holding a milestone review within a reasonable length of time [after] its scheduled date constitutes a de facto decision," the report says, "since available funds continue to be expended on the program."

As a result, the report says, the Navy will spend several hundred million dollars in fiscal 1985 to produce and deploy a long-range acoustic sensor that will be of limited use against the most modern Soviet submarines. A DSARC decision was also made to spend additional millions on a new anti–submarine warfare helicopter, despite the absence of an adequate test plan or any realistic estimates of total costs. Millions of dollars were also spent on a new computer network for antiaircraft weapons without clear evidence that it was better than the old one, the report concludes.

More recent reports by the Pentagon's Office of Inspector General reveal that preliminary design of the Navy's new attack submarine was approved by DSARC last December without official data on the Soviet threat and a clear idea of its future missions and requirements.

*The members include the under secretary of defense for research and engineering (now vacant), the under secretary of defense for policy (Fred Ikle), the Defense Department comptroller (Vincent Puritano), the director of the office of planning and evaluation (David Chu), the chairman of the Joint Chiefs of Staff (John Vessey), and the assistant secretary of defense for manpower and logistics (Lawrence Korb).

The program is expected to cost more than $2.85 billion between 1985 and 1990, and tens of billions of dollars before it is completed. Because the council members failed to exercise their authority, another report says, the Army was allowed to begin design and development of a new light helicopter on an accelerated schedule without a clear idea of its mission, adequate data on the Soviet threat, or a clear understanding of its total costs.

In addition, the Navy was able to devote 9 years to preliminary design of a new high-frequency communications network without a complete testing plan, an official estimate of the Soviet threat, and a "clear program definition," one inspector general's report concluded. The Air Force was able to accelerate development of a modified F-16 jet fighter for battlefield reconnaisance use, despite substantial evidence that an unmanned drone could perform the function better, at less cost.

Similarly, the Army was able to spend $164.7 million on research and development of a new mortar round without a realistic estimate of total costs and technical risks. And finally, the Air Force was able to begin advanced development of a jam-resistant battlefield communications system without a formal estimate of the Soviet threat, a test plan, or a source of funds for anticipated improvements, according to the inspector general's report. The program is expected to cost more than $3.5 billion before it is completed. All of these programs qualified for DSARC review.

"More often than not, we found that some portion of the required documentation was not prepared for the DSARC," explains Derek Vander Schaaf, the deputy Pentagon inspector general. "This is really a problem when you are talking about new [program] starts. You can get very committed to these programs . . . without necessarily making [an informed] decision. You keep the money going but higher management doesn't review the program in any depth and it keeps moving forward" to the next stage. If no test plan is prepared, the designers have no clear goals to meet, and the specifications eventually slip. When total costs are not estimated accurately, he adds, "you've got an underfunded program, [and] you start reducing production rates or stretching other programs to pay for it. Pretty soon a lot of things become more expensive, whereas you maybe should have made a decision to terminate" the program earlier.

One potential solution is that DSARC members delegate less procurement authority to the individual armed services. Commenting on the DIVAD case, Senator William Roth (R-Del.), the chairman of the Senate governmental affairs committee, says, "this report indicates that top Pentagon officials have delegated so much authority to lower levels that the decisionmakers often are unaware of problems in a system and may not fully utilize information to make important decisions. As many of these systems are developed . . . they take on a momentum of their own, like a giant snowball, which becomes almost impossible to slow down by the time the systems reach the Secretary of Defense for a 'buy/don't buy' decision."

John Smith, the DSARC executive secretary, says that detailed replies to the inspector general's comments will be prepared in coming weeks. In general, he says, "we will attempt to run the process more rigorously as a result of their recommendations. However, if we adhered to every rule without exception it would eliminate all flexibility. The important thing is to obtain the relevant information, and whether a document is timely or in the right form is sometimes unimportant."—**R. JEFFREY SMITH**

Troubles Plague Polish Physicists

Despite the release of most political prisoners in Poland last summer and the gradual thaw in U.S.–Polish relations, troubles persist within the Polish scientific community. To protest conditions at the Institute of Nuclear Problems in Swierk, the U.S. Committee of Concerned Scientists in December sent a sharply worded letter to the institute's director and other Polish officials, criticizing continued mistreatment of the institute's scientific staff and urging that those who were fired 2 years ago be reinstated.

The institute has been at the center of controversy since its start. It was formed on 1 January 1983, along with the Institute for Atomic Energy and the Institute of Nuclear Chemistry and Technology, when Polish officials "reorganized"—in fact, disbanded—the internationally respected Institute for Nuclear Research. Many Polish scientists regarded the reorganization as a thinly veiled effort to fire many of the now-defunct institute's scientific staff, abandon certain research projects, and revamp the administration so that it answered to the demands of the government rather than the needs of the staff. Those actions also stirred wide concern that Poland's capacity for high-level physics research was being severely damaged.

Many of the scientists fired shortly after the reorganization were never rehired and have been prevented from obtaining suitable jobs elsewhere, the letter says. "As a result, both the caliber of Polish science and international scientific cooperation have suffered."

In late 1982, 32 employees at the institute were fired outright after a demonstration against deteriorating conditions there. Most of them, on appeal, won their jobs back only to have that seeming victory snatched away when the reorganization plan was put in place. Many more institute employees lost their jobs in early 1983.

During this period, collaborative ties with research institutes in Western Europe and the United States also have been cut back considerably. Ties with the West were badly damaged in December 1981 when the Polish government established martial law, which was lifted on 22 July 1983. Although the general amnesty granted in July 1984 has started a slow formal process for reforming these ties, there has been little enthusiasm to restore programs to their premartial law status (*Science*, 24 August, p. 816).

Thus, despite a somewhat eased political climate, "Conditions are still very difficult for doing science," says a recent visitor to Poland. "The [nuclear institute] people who were fired or suspended still are not finding employment suited to their talents." For example, he says, one scientist who was associated with the institute for more than 20 years and helped build its linear proton accelerator, was fired 2 years ago, and he has been forced to work privately as an electronics technician.

The Committee of Concerned Scientists has lodged its protest with the institute's current director, the Polish Academy of Sciences, and government leaders, asking that the former employees either be rehired or that they be given suitable jobs elsewhere.—**JEFFREY L. FOX**