GAO
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Highlights

DOD SPACE ACQUISITIONS

Stronger Development Practices and Investment Planning Needed to Address Continuing Problems

Why GAO Did This Study

GAO was asked to testify on problems relating to the Department of Defense's (DOD) space system acquisitions. In doing so, we drew on our previous reports related to the causes of acquisition problems, underlying incentives and pressures, and potential solutions.

What GAO Recommends

DOD has attempted to address its problems in space system acquisitions, but, as our reports have indicated, there is still a critical need to adopt practices that would assure DOD:

- Separates technology development from acquisition;
- Adopts evolutionary approaches that pursue incremental increases in capability; and
- Guides program start decisions with investment strategies that identify (1) overall capabilities and how to achieve them, that is, what role space will play versus other air-, sea-, and land-based assets and (2) priorities for funding.

What GAO Found

Our work on the acquisition of space-based capabilities over the last several years has been conducted on two levels. First, we have reviewed most of the major space system acquisitions to determine their status at different points in time. The results are discouraging—systems cost more and take much longer to acquire than promised when initially approved. In some cases, the justification or business case for the system when initially approved is far different from the current status, so DOD has had to re-assess the need to acquire that particular system and the soundness of its acquisition strategy.

Second, we have analyzed the common and causal factors for these poor acquisition outcomes. Overall, we have found that DOD has been unable to match resources (technology, time, money) to requirements before beginning individual programs, setting the stage for technical and other problems, which lead to cost and schedule increases. Specifically:

- Requirements for what the satellite needed to do and how well it must perform are not adequately defined at the beginning of a program or are changed significantly once the program has begun.
- Technologies are not mature enough to be included in product development.
- Cost estimates are unreliable—largely because requirements have not been fully defined and because programs start with many unknowns about technologies.

We also have reported on cross-cutting factors that make it more difficult for DOD to achieve a match between resources and requirements for space acquisitions. These include: a diverse array of organizations with competing interests; a desire to satisfy all requirements in a single step, regardless of the design or technology challenge; and a tendency for acquisition programs to take on technology development that should occur within the S&T environment. On a broader scale, DOD starts more programs than it can afford in the long run, forcing programs to underestimate costs and over promise capability. As a result, there is pressure to suppress bad news about programs, which could endanger funding and support, as well as to skip testing because of its high cost.

One key to success is closing the gaps between available technologies and customer needs before beginning an acquisition program. This puts programs in a better position to succeed because they can focus on design, system integration, and manufacturing. DOD has recently revised its space acquisition policy, in part to attain more knowledge about technologies before starting an acquisition. However, we remain concerned that the policy still allows programs to begin before demonstrating technologies in an operational or simulated environment.

United States Government Accountability Office