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SPACE ACQUISITIONS

DOD Faces Challenges in Fully Realizing Benefits of Satellite Acquisition Improvements

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Highlights

Highlights of GAO-12-563T, a testimony before the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate

Why GAO Did This Study

Each year, the DOD spends billions on large space acquisition programs, which have in the past experienced cost and schedule overruns and increased technical risk. At present, though, the worst of these problems may be over, and programs long troubled are finally being launched. Challenges persist, but they are less significant than they were. With today's fiscal constraints, however, DOD must find ways to keep its new major space acquisitions on track, as operating in space is expensive and DOD is still replenishing legacy programs like missile warning, protected communications, and environmental monitoring. Significant barriers exist to ensuring such investments are optimized.

To address the progress DOD has made this year, this testimony will focus on (1) the current status of space system acquisitions; (2) results of GAO's space-related reviews this past year; (3) actions taken to address DOD space acquisition problems; and (4) remaining challenges that stand in the way of DOD fully realizing the benefits of satellite acquisition improvements. This testimony is based on previously issued GAO products as well as analysis of DOD funding estimates.

GAO does not make recommendations in this testimony. However, in previous reports GAO has generally recommended that DOD adopt best practices for developing space systems such as separating technology development from product development. DOD is in the process of implementing such practices.

View GAO-12-563T. For more information, contact Cristina Chaplain at (202) 512-4841 or chaplainc@gao.gov.

What GAO Found

Last year, GAO testified that though acquisition problems still existed in many space programs, the Department of Defense (DOD) was beginning to launch satellites that had long been lagging behind schedule and it had taken positive actions to instill better practices and more focused leadership for space. Progress has continued. Over the past year, DOD launched the first Navy Mobile User Objective System (MUOS) satellite; the first, after a nine-year delay, of six Space Based Infrared System (SBIRS) geosynchronous earth orbit (GEO) satellites; and the first Advanced Extremely High Frequency (AEHF) satellite—all of which will bring important capability to the warfighter. While these launches represent solid progress, there have also been some drawbacks. For instance, the second Global Positioning System (GPS) IIF satellite experienced technical problems that could shorten its operational lifetime. The cost of the first two GPS III satellites is at least18 percent higher than first estimated, up to $1.6 billion today. A 1-year delay is expected by SBIRS program officials on production of the 3rd and 4th GEO satellites along with a $438 million cost overrun. And, a termination of the Defense Weather Satellite System (DWSS) may result in a capability gap. Moreover, even though problems have been overcome, DOD must still contend with the effects of its previous difficulties on its investment portfolio.

Recent GAO reviews highlight other difficulties facing DOD space programs. GAO's review of a new acquisition strategy for the Evolved Expendable Launch Vehicle program, for instance, identified a need for more knowledge about the industrial base as well as cost and pricing in order to optimize a sizable investment in launch vehicles. GAO's review of parts quality problems in major DOD, Missile Defense Agency, and National Aeronautics and Space Administration (NASA) programs illustrated that acquisition reforms need to be buttressed with closer attention to the quality of piece parts as issues have vexed most major programs. GAO, however, credited the agencies with instituting collaborative efforts to address supplier quality.

Though it still faces an array of challenges, DOD continues to work to ensure its space programs are more executable and produce a better return on investment. For example, DOD intends to follow incremental or evolutionary acquisition processes and it has acted to streamline management and oversight of the national security space enterprise. The agency has taken steps toward reforming the defense acquisition system to help its programs to meet planned cost and schedule objectives. Because DOD intends to address the root causes of problems, it will take time to determine if these actions are successful or need further actions on how best to lead, organize, and support space activities.

Moreover, there are significant barriers to ensuring investments are optimized. These include fragmented leadership, the rising cost of launch, uncertainty about the future for technology advancements, and disconnects between the fielding of satellites with user equipment and ground systems needed to take advantage of expensive new capabilities. Addressing all of these challenges are needed to maintain space superiority in an era of fiscal austerity, but their resolution also requires the participation and cooperation of all the military services, the intelligence community, and agencies such as NASA and the National Oceanic and Atmospheric Administration.