



Highlights of [GAO-07-730T](#), a testimony before the Subcommittee on Strategic Forces, Senate Committee on Armed Services

Why GAO Did This Study

DOD's space system acquisitions have experienced problems over the past several decades that have driven up costs by hundreds of millions, even billions of dollars, stretched schedules by years, and increased performance risks. DOD has recognized the need to change its approach to developing space systems and is attempting to instill best practices in new efforts. GAO was asked to testify on its findings on space acquisitions problems and steps needed to sustain and expand the use of best practices. In preparing this testimony, GAO relied on its detailed reviews of space programs as well as cross-cutting work on cost estimating and best practices.

GAO does not make recommendations in this testimony. However, GAO has made recommendations on steps DOD can take to ensure better outcomes for its space acquisitions programs. These include developing an overall investment strategy for acquisition programs, addressing human capital and other shortfalls in capacity, and revising policies supporting space to incorporate best practices.

www.gao.gov/cgi-bin/getrpt?GAO-07-730T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Cristina Chaplain at (202) 512-4841 or chaplainc@gao.gov.

SPACE ACQUISITIONS

Actions Needed to Expand and Sustain Use of Best Practices

What GAO Found

The majority of major acquisition programs in DOD's space portfolio have experienced problems during the past two decades that have driven up cost and schedules and increased technical risks. At times, cost growth has come close to or exceeded 100-percent, causing DOD to nearly double its investment in the face of technical and other problems without realizing a better return on investment. Along with the increases, many programs are experiencing significant schedule delays—as much as 6 years—postponing delivery of promised capabilities to the warfighter. Outcomes have been so disappointing in some cases that DOD has had to go back to the drawing board to consider new ways to achieve the same, or less, capability.

GAO's reviews of space acquisitions this year found that some ongoing programs—for example, the Advanced Extremely High Frequency satellite program and the Wideband Global SATCOM program—have been able to work through the bulk of technical problems they were facing and are on track to meet revised targets, albeit at higher costs and with delayed capability. Others, however, including the Space-Based Infrared System High program, the Global Positioning System IIF, and the National Polar-orbiting Operational Environmental Satellite System, continue to face setbacks and further risks.

In recognizing the need to reform space acquisitions, DOD has taken steps to instill best practices in two new major space efforts—the Transformational Satellite Communications System (TSAT) and the Space Radar program—which are expected to be among the most complex and costly space programs ever. For these programs, DOD has taken steps to separate technology discovery from acquisition, establish an incremental path toward meeting user needs, obtain agreements on requirements before program start, and use quantifiable data and demonstrable knowledge to make decisions to move to next phases. If these actions can be sustained, DOD will greatly reduce technical risks, although not completely. There is still significant inherent risk associated with integrating critical technologies on board the satellites and with developing the software needed to achieve the capabilities of the satellites.

Moreover, sustaining these reforms on these two programs and expanding them to others will not be easy. Like all weapons programs, space programs continue to face funding pressures that have encouraged too much optimism. DOD has not prioritized its programs for funding even though its investment for all major space acquisitions is expected to increase about 46 percent in the next 3 years. It is likely to continue to face cost overruns on problematic programs, and it wants to undertake other major new efforts in addition to Space Radar and TSAT. In addition, new programs are being undertaken as DOD is addressing shortfalls in critical technical, business, and program management skills. In other words, DOD may not be able to obtain the right skills and experience to manage all of the new efforts.