GAOHighlights

Highlights of GAO-25-107034, a report to congressional committees

Why GAO Did This Study

GAO has reported for over a decade on the longstanding challenges DOD faces in acquiring and delivering SATCOM systems, including cost and schedule overruns. In 2020, the Chief of Space Operations declared that SATCOM had to evolve from disparate systems into a single enterprise to operate in contested environments, be more resilient, and address evolving threats. DOD is now starting to shift its approach to SATCOM acquisition to provide more secure, interoperable systems that aim to better leverage the \$500 billion global space market. But, as GAO found in 2024, DOD averages 10 years to acquire and deliver new systems (GAO-24-106831).

A Senate report includes a provision for GAO to review DOD's SATCOM planning efforts. GAO's report addresses (1) DOD's coordination and acquisition of SATCOM, including any plans to use commercial SATCOM; and (2) the extent to which DOD is ensuring SATCOM acquisitions can deliver interoperable capabilities.

GAO reviewed and analyzed DOD's operational needs, plans, and other relevant documentation. GAO also interviewed cognizant officials from across the Office of the Secretary of Defense, military departments, and the commercial SATCOM industry.

What GAO Recommends

GAO recommends that DOD reports to Congress annually on its progress implementing an enterprise approach to SATCOM, to include identifying outcomes, opportunities, and risks. DOD concurred with this recommendation.

View GAO-25-107034. For more information, contact Jon Ludwigson at (202) 512-4841 or ludwigsonj@gao.gov.

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DOD SATELLITE COMMUNICATIONS

Reporting on Progress Needed to Provide Insight on New Approach

What GAO Found

The Department of Defense (DOD) is implementing a new approach to satellite communications (SATCOM) that aims to integrate existing and planned DOD systems, as well as a range of commercial options, into a department-wide SATCOM enterprise. Traditionally, the SATCOM systems that the department depends upon to send and receive information over long distances have relied on a small number of high-cost satellites along with ground stations and user terminals that each connect to a single type of satellite. The failure of one part of these systems would disrupt transmissions.

With DOD's new approach, satellite constellations, ground systems, and user terminals would operate as networked, integrated systems. Compared to the traditionally linear structure of independent SATCOM systems, these integrated architectures would allow multiple paths for communications to reach their destination and multiple points of access to add resilience. DOD plans to implement elements of the new approach within the next 5 years.

Shift from Linear Satellite Communications Systems to Integrated Architectures





Source: GAO illustration and representation of Department of Defense documents. | GAO-25-107034

To accomplish this shift, DOD is increasing coordination among SATCOM stakeholders and with commercial SATCOM providers. Implementing enterprise SATCOM also depends on DOD enacting two key components: automating resource allocation and implementing integrated architectures. To support these components, DOD is also expanding its use of commercial SATCOM capabilities.

Both components of this shift face challenges. First, while DOD has begun automating SATCOM resource allocation, obtaining the different forms of access and permissions to enable data sharing is a challenge, according to officials. Second, DOD is acquiring necessary SATCOM systems, such as user terminals that connect to multiple satellite systems or constellations. However, the historically slow speed of system acquisitions poses a challenge to fielding these systems in time to support DOD's plans.

While DOD is making initial progress toward enterprise SATCOM, the harder part of this shift—developing and integrating hybrid SATCOM systems and networks—lies ahead. GAO found that while DOD tracks progress on the components of enterprise SATCOM, it lacks comprehensive reporting on progress toward these outcomes. Such reporting would help DOD identify and mitigate delays as early as possible, as well as inform Congress of progress.