GAO Highlights

Highlights of GAO-23-105920, a report to congressional committees

June 2023

SPACE COMMAND AND CONTROL

Improved Tracking and Reporting Would Clarify Progress amid Persistent Delays

Why GAO Did This Study

Between 2000 and 2022, the Department of the Air Force spent over $1.7 billion to replace its systems that track and control satellites. These systems are well beyond their expected service lives.

DOD began the Space C2 program in 2018 to improve space command and control activities. Congress included a provision in statute for GAO to review annual Air Force Reports on Space C2. This report addresses (1) challenges to Space C2's development efforts and how the program is addressing them; and (2) the extent to which the Air Force's 2022 annual report included required elements and, with additional program reporting, provided information for oversight.

To conduct this work, GAO analyzed Space C2 program documentation of requirements, Agile software development practices, and its cost estimate. GAO then compared this documentation against leading practices in GAO's Agile and Cost Estimating Guides. GAO also assessed the 2022 Space C2 annual report against statutory requirements and, with other program reporting, against leading practices in GAO's Agile Guide. GAO also interviewed officials from the DOD, Air Force, and Space Force.

What GAO Recommends

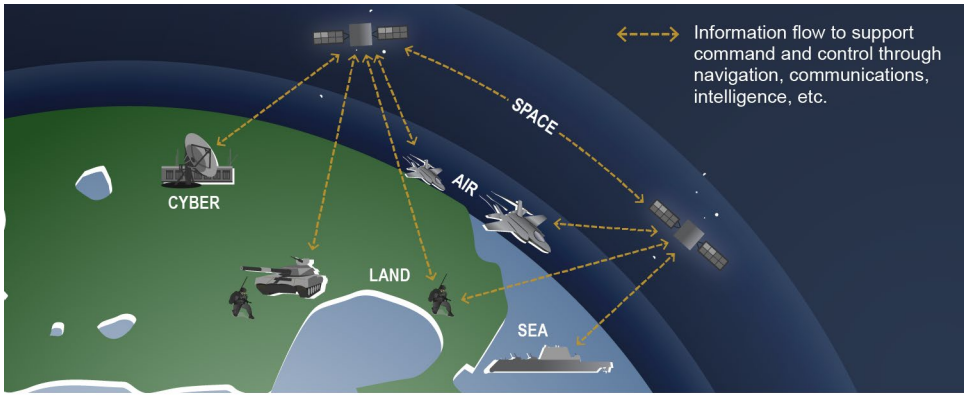
GAO is making three recommendations to the Air Force to ensure the program includes consistent metrics in annual and internal reports, and documents how it will meet requirements. DOD concurred with all three of the recommendations.

View GAO-23-105920. For more information, contact Jon Ludwigson at (202) 512-4841 or ludwigsonj@gao.gov.

What GAO Found

Space systems—such as satellites—are vital to the military's ability to project combat power, collect intelligence, navigate, and communicate across the globe. In an increasingly crowded space domain, threats to military space systems are also growing. Space command and control is the ability for military commanders to make timely, strategic decisions, take tactical actions to meet mission goals, and counter threats to U.S. space assets. This decision-making depends on underlying data collection and analysis. The Space Command and Control (Space C2) program is the Department of Defense's (DOD) latest software-intensive system intended to provide this capability.

Space Capabilities Support Other Warfighting Domains



Source: GAO representation of U.S. Space Force documents. | GAO-23-105920

The Space C2 program is making changes to address persistent management challenges, but it is too soon to tell if changes will lead to improvement. For example, in 2021, the program shifted additional resources to meet critical, complex requirements after years of focus on less critical requirements. However, to deliver some of these critical requirements sooner, Space C2 scaled back planned development efforts. Users will still rely on older, outdated systems until Space C2 can complete these development efforts.

The 2022 Space C2 annual report addressed statutory requirements. However, Space C2's program documentation and reporting—both in its annual report and internal reports—do not give a clear picture of progress.

- **Reporting**. Space C2's 2022 annual report does not provide context or performance results data necessary to understand overall progress. Similarly, internal reporting does not provide consistent results based on metrics that would enable comparison across reports.
- **Requirements tracking**. Program documents do not show how Space C2 will ensure it is on track to meet requirements. Historically, Space C2 did not complete all planned development efforts as scheduled, and the lack of documentation obscures a useful picture of progress.

With its persistent delays in delivering key capabilities, improved tracking and consistent metrics would help demonstrate the extent to which the Space C2 program is making progress.