DEFENSE ACQUISITIONS

Steps Needed to Ensure Interoperability of Systems That Process Intelligence Data

Why GAO Did This Study

Making sure systems can work effectively together (interoperability) has been a key problem for the Department of Defense (DOD) yet integral to its goals for enhancing joint operations. Given the importance of being able to share intelligence data quickly, we were asked to assess DOD's initiative to develop a common ground-surface-based intelligence system and to particularly examine (1) whether DOD has adequately planned this initiative and (2) whether its process for testing and certifying the interoperability of new systems is working effectively.

What GAO Recommends

GAO recommends that DOD enhance its planning to include a detailed migration plan and schedule. GAO also recommends that DOD take steps needed to enforce its process and determine why the services are slow to certify systems in order that it can implement controls and incentives needed to spur compliance. DOD generally agreed with our recommendations.

What GAO Found

DOD relies on a broad array of intelligence systems to study the battlefield and identify and hit enemy targets. These systems include reconnaissance aircraft, satellites, and ground-surface stations that receive, analyze, and disseminate intelligence data. At times, these systems are not interoperable—either for technical reasons (such as incompatible data formats) and/or operational reasons. Such problems can considerably slow down the time to identify and analyze a potential target and decide whether to attack it.

One multibillion-dollar initiative DOD has underway to address this problem is to pare down the number of ground-surface systems that process intelligence data and upgrade them to enhance their functionality and ensure that they can work with other DOD systems. The eventual goal is an overarching family of interconnected systems, known as the Distributed Common Ground-Surface System (DCGS).

To date, planning for this initiative has been slow and incomplete. DOD is developing an architecture, or blueprint, for the new systems as well as an overarching test plan and an operational concept. Although DCGS was started in 1998, DOD has not yet formally identified which systems are going to be involved in DCGS; what the time frames will be for making selections and modifications, conducting interoperability tests, and integrating systems into the overarching system; how transitions will be funded; and how the progress of the initiative will be tracked.

Moreover, DOD's process for testing and certifying that systems will be interoperable is not working effectively. In fact, only 2 of 26 DCGS systems have been certified as interoperable. Because 21 of the systems that have not been certified have already been fielded, DOD has a greater risk that the new systems will not be able to share intelligence data as quickly as needed. Certifications are important because they consider such things as whether a system can work with systems belonging to other military services without unacceptable workarounds and whether individual systems conform to broader architectures designed to facilitate interoperability across DOD.

Examples of Ground-Surface Systems Involved in DCGS

Navy system that allows shipboard operators to monitor and analyze signals intelligence

Remote Army system that processes and analyzes data from a variety of intelligence collecting sources on the battlefield

Centralized military facilities that receive and transmit data and imagery from reconnaissance aircraft, radar systems, satellites

Source: GAO.

United States General Accounting Office