DEFENSE ACQUISITIONS

The Global Information Grid and Challenges Facing Its Implementation

Why GAO Did This Study

The Department of Defense (DOD) is in the midst of transforming military capabilities. The transformation relies in part on the Global Information Grid (GIG), which is focused on building a new Internet-like network capability that DOD envisions will enable weapons and other systems and people to share information quickly, allowing warfighters to identify threats more effectively and to respond with greater precision and lethality. DOD plans to spend at least $21 billion through 2010 to build a core GIG capability. GAO was asked (1) to describe the GIG, including the concept, key acquisitions, and implementation and (2) to identify significant challenges facing DOD in implementing the GIG.

What GAO Recommends

GAO is not making recommendations in this report as this effort is focused on providing an initial overview of the GIG and challenges. Our future work will continue to assess how DOD is addressing challenges and the progress of key acquisitions. DOD-provided technical comments on this report are incorporated where appropriate.

www.gao.gov/cgi-bin/getrpt?GAO-04-858.

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

What GAO Found

The GIG is a huge and complex undertaking that is intended to integrate virtually all of DOD's information systems, services, and applications into one seamless, reliable, and secure network. DOD's overall concept is to enable data access for a variety of systems and users in the network no matter which military service owns a weapon system or where a user might be located around the world. DOD is looking to the GIG to form the basis of a network-centric or "netcentric" way of fighting wars and to create a decisive advantage over adversaries. DOD has taken the following two-pronged approach to building the GIG:

(1) Invest in key acquisitions to build a core networking capability, including new communication satellites, next-generation interoperable radios, a new ground-based communication network with significantly expanded bandwidth, and services and applications to manage and protect the network and help users locate, post, and share information.

(2) Integrate other existing and planned weapon systems, information technology systems, and logistics, personnel, and other business-related systems into the GIG. To integrate other systems, DOD officials who created the concept for the GIG have developed an initial blueprint or architecture for the GIG and policies to formalize the GIG, and they are attempting to influence key acquisition and budgeting decisions to align investments and systems with the GIG.

The most critical challenge ahead for DOD is making the GIG a reality. While DOD has taken steps to define its vision and objectives for the GIG on paper and in policy and is beginning to make a heavy investment in the GIG as well as systems that will be heavily dependent on the GIG, it is not fully known how DOD will meet these objectives. For example, it is not known which investments should take priority over others and how these decisions will be enforced. Moreover, it is not known how DOD will assess the overall progress of the GIG and determine whether the network as a whole is providing a worthwhile return on investment, particularly in terms of enhancing and even transforming military operations. According to DOD officials, the enhancements DOD is making to its planning and budgeting processes are meant to begin addressing these questions. Until DOD implements an investment and oversight strategy for the GIG as a whole, it is at risk of making investments that do not fit DOD's vision for the future.

Highlights of Key Challenges Facing DOD's Implementation of the GIG

- Deciding what capabilities are affordable, what capabilities are unaffordable or not in line with DOD's vision for the GIG, and enforcing these decisions
- Assuring management attention and oversight are provided to assess the overall progress and return on investment
- Developing a trustworthy network so data owners will share data with a broader audience
- Advancing technologies on schedule
- Developing the means to protect the network and its data

Source: GAO analysis.